

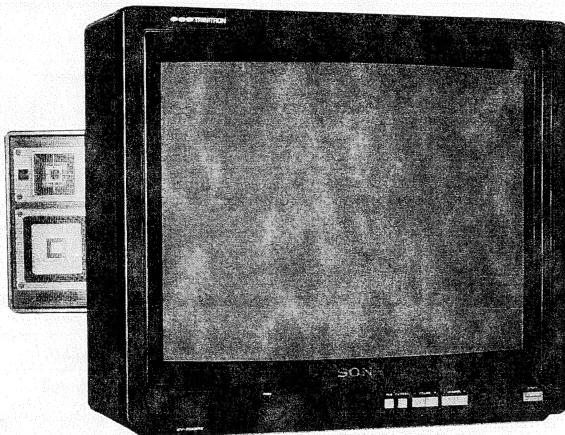
KV-20XBR II

RM-724/APM-X4

SERVICE MANUAL

Canadian Model

Chassis No. SCC-607D-A



January, 1987

P2B CHASSIS

Note: The service manuals for RM-724 and APM-X4 have been issued separately.

SPECIFICATIONS

Television system	American TV standards	Video/audio outputs
Channel coverage	VHF: 2-13 UHF: 14-69	TV OUT (AV phono jack) Video: 1 Vp-p, 75 ohms unbalanced, sync negative
Cable TV	1-125	Audio: 408 mVrms (100% modulation, 5 kilohms)
Picture tube	Microblack Trinitron 20-inch picture measured diagonally 21-inch picture tube measured diagonally 100-degree deflection	MONITOR OUTPUT (phono jacks) Video: 1 Vp-p, 75 ohms unbalanced, sync negative Audio: 408 mVrms (100% modulation, 5 kilohms)
Antenna	75-ohm external antenna terminal for VHF/UHF/CATV, AUX and TO CONVERTER	PHONES (stereo minijack) Accepts 8-ohm headphones
Video/audio inputs	VIDEO 1, 3 INPUT (phono jacks) Video: 1 Vp-p, 75 ohms, unbalanced, sync negative Audio: 408 mVrms (100% modulation, 47 kilohms)	SPEAKER terminals Accept 8-ohm speakers
	VIDEO 2 IN AV (AV phono jack) Video: 1 Vp-p, 75 ohms, unbalanced, sync negative Audio: 408 mVrms (100% modulation, 47 kilohms)	RGB MULTI INPUT connector 34-pin See the table on next page.
		CONTROL IN/OUT jacks Minijack, 5 Vp-p
		Power requirements 120 V AC, 60 Hz
		Power consumption 145 W (max.) 1.5 W (in standby condition)

— Continued on next page —

TRINITRON® COLOR TV
SONY®



CTV

Dimensions	502 × 439 × 467 mm (w/h/d) (19 1/8 × 17 3/8 × 18 3/8 inches) without speakers 656 × 439 × 467 mm (w/h/d) (25 1/8 × 17 3/8 × 18 3/8 inches) including speakers
Weight (without speakers)	25 kg (55 lb 2 oz)
Accessories supplied	Side-mounting speakers with speaker cords(1 pair) Weight Approx. 1.9 kg (4 lb 3 oz) each APM unit 55 cm ² (8.5 in ²) Tweeter unit 20 mm (13/16 inches) dia. Remote Commander RM-724 with 2 size AA batteries(1) Antenna connector (300 ohm to 75 ohm matching transformer)(1)
Optional accessories	SU-173 Audio/Video connecting cables U/V mixer EAC-66 RGB multi connector PX-34 Plug adaptor PC-33

RGB MULTI INPUT (34-pin)

Pin No.	Signal assignment
1	+5 V power supply
2	+5 V power supply
3	Audio (R) input ground
4	Ground
5	Remote control ground
6	Composite video output ground
7	Audio (L) input ground
8*, 9*, 10*	Ground
11	Ground
12*, 13*	Ground
15*	Ground
16	Ground
20	Audio (R) input
21	Mode select
23	Composite video output
24	Audio (L) input
25	Red input
26	Green input
27	Blue input
29*	Blanking input
30*	H. sync or composite sync
31*	V. sync
33	RGB/NORMAL mode select
34	Audio select
14, 17, 18, 19, 22, 28, 32	Not in use

* For No. 8 and 25, 9 and 26, 10 and 27, 12 and 29, 13 and 30, or 15 and 31 connections, use a twisted-pair lead.

Design and specifications subject to change without notice.

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WARNING !!

AN ISOLATION TRANSFORMER SHOULD BE USED DURING ANY SERVICE TO AVOID POSSIBLE SHOCK HAZARD, BECAUSE OF LIVE CHASSIS.
THE CHASSIS OF THIS RECEIVER IS DIRECTLY CONNECTED TO THE AC POWER LINE.

SAFETY-RELATED COMPONENT WARNING !!

COMPONENTS IDENTIFIED BY SHADING AND MARK  ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY. CIRCUIT ADJUSTMENTS THAT ARE CRITICAL TO SAFE OPERATION ARE IDENTIFIED IN THIS MANUAL. FOLLOW THESE PROCEDURES WHENEVER CRITICAL COMPONENTS ARE REPLACED OR IMPROPER OPERATION IS SUSPECTED.

ATTENTION!!

AFIN D'EVITER TOUT RISQUE D'ELECTROCUTION PROVENANT D'UN CHASSIS SOUS TENSION, UN TRANSFORMATEUR D'ISOLEMENT DOIT ETRE UTILISE LORS DE TOUT DEPANNAGE.
LE CHASSIS DE CE RECEPTEUR EST DIRECTEMENT RACCORDE A L'ALIMENTATION SECTEUR.

ATTENTION AUX COMPOSANTS RELATIFS A LA SECURITE!!

LES COMPOSANTS IDENTIFIES PAR UNE TRAME ET PAR UNE MARQUE  SUR LES SCHEMAS DE PRINCIPE, LES VUES EXPLOSEES ET LES LISTES DE PIECES SONT D'UNE IMPORTANCE CRITIQUE POUR LA SECURITE DU FONCTIONNEMENT. NE LES REMPLACER QUE PAR DES COMPOSANTS SONY DONT LE NUMERO DE PIECE EST INDIQUE DANS LE PRESENT MANUEL OU DANS DES SUPPLEMENTS PUBLIES PAR SONY. LES REGLAGES DE CIRCUIT DONT L'IMPORTANCE EST CRITIQUE POUR LA SECURITE DU FONCTIONNEMENT SONT IDENTIFIES DANS LE PRESENT MANUEL. SUIVRE CES PROCEDURES LORS DE CHAQUE REMPLACEMENT DE COMPOSANTS CRITIQUES, OU LORSQU'UN MAUVAIS FONCTIONNEMENT EST SUSPECTE.

1-1. LOCATION OF CONTROLS

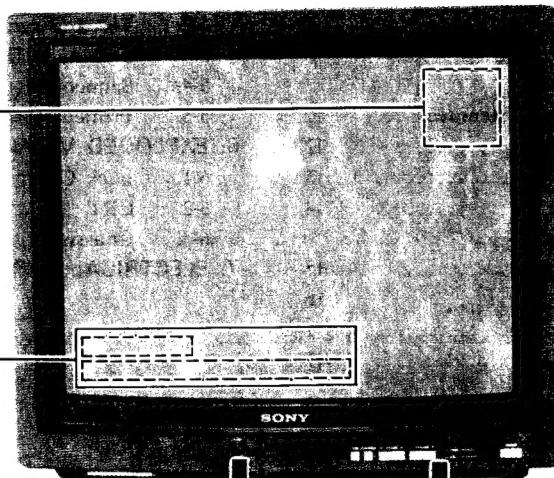
Front

On-screen display indicates—

- channel numbers
- "MUTING" mode
- "SLEEP" mode
- "MAIN", "SAP" or "BOTH" mode
- "VIDEO 1", "VIDEO 2", "VIDEO 3", "EXT-A", "RGB" or "AUX" mode

On-screen display indicates—

- picture or sound adjustment element and its level indicated by the segmented color bar
- "TRINITONE" adjustment mode
- "RESET" mode



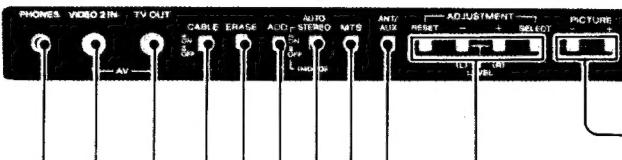
PHONES (headphones) jack

VIDEO 2 IN AV jack

TV OUT AV jack

CABLE button

ERASE button



PICTURE buttons

ADJUSTMENT buttons

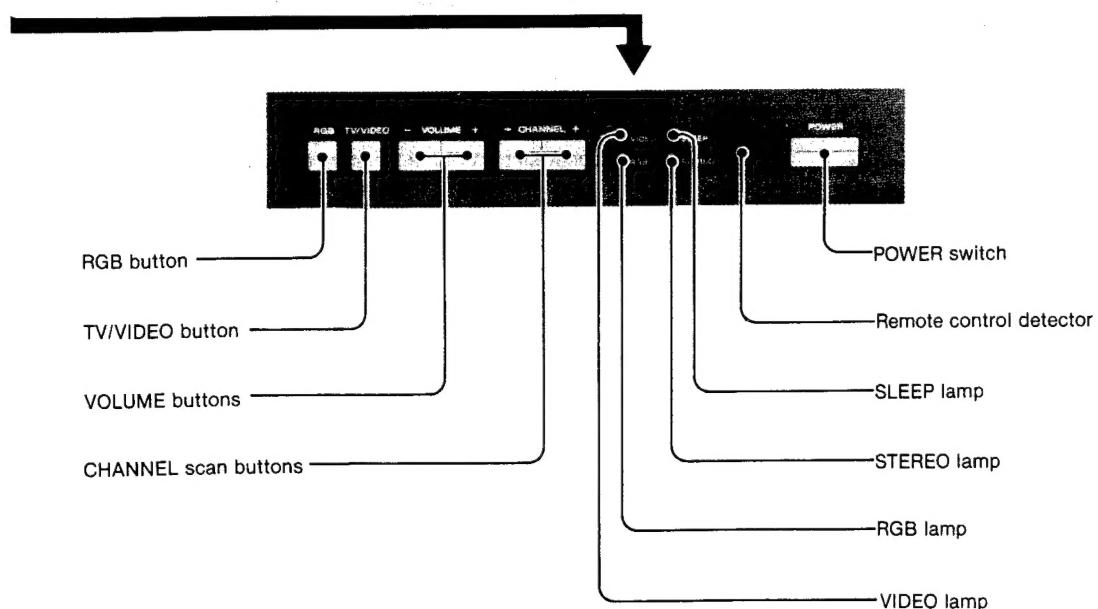
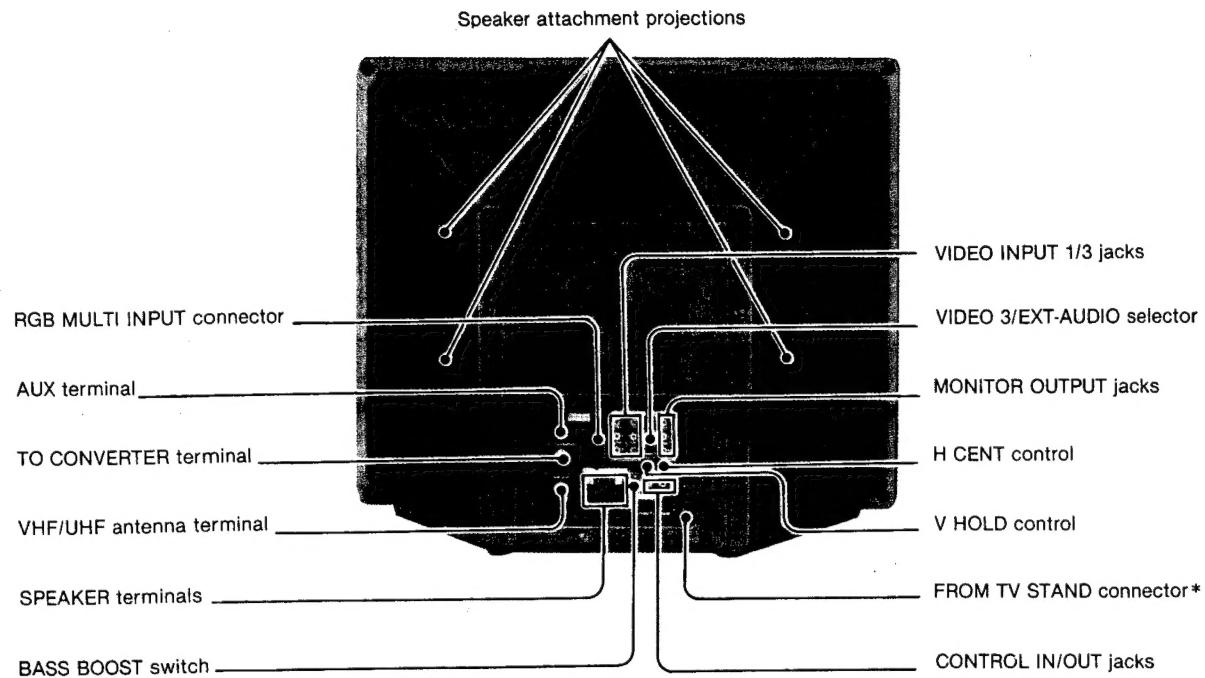
ANT/AUX button

MTS button

AUTO STEREO button

ADD button

Rear

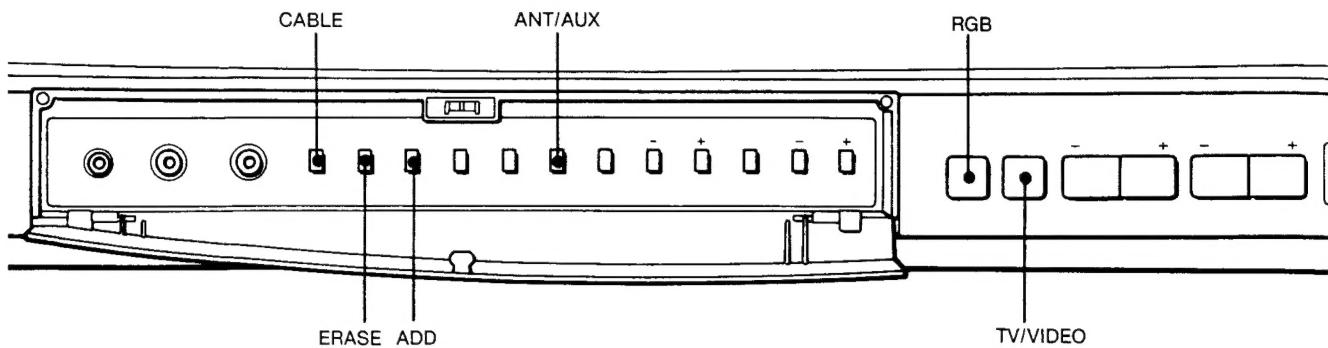


1-2. SET-UP

PROGRAMMING FAVORITE CHANNELS

The TV can be programmed so that when the CH +/- buttons are pressed, only locally available or favorite channels will be scanned, and unwanted channels will be skipped.

Some channels have already been programmed into the TV at the factory. Scan through the channels, and select the channels to be added and those to be erased.



PREPARATIONS

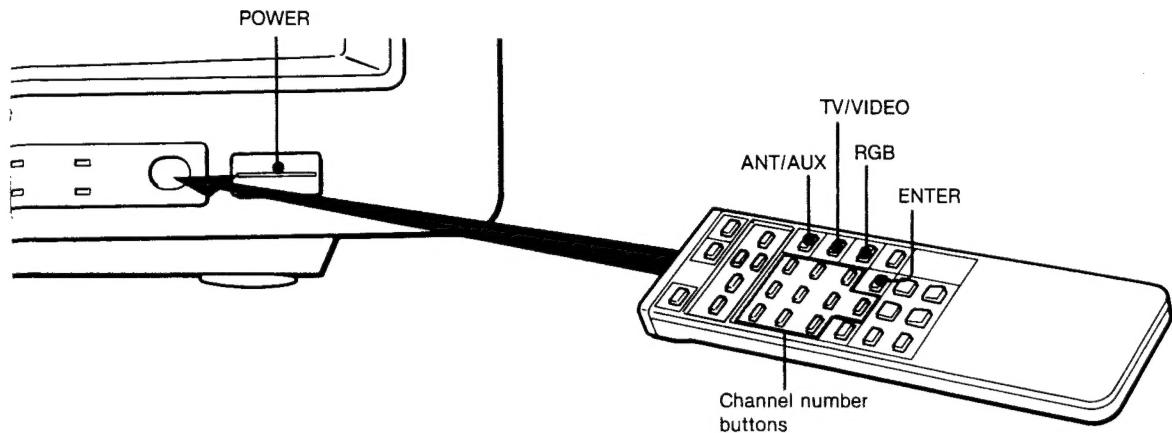
- 1 Press POWER to turn on the unit.
- 2 On-screen indications "VIDEO 1", "VIDEO 2", "VIDEO 3", "EXT-A" or "RGB" should be off. If not, press TV/VIDEO or RGB so that they disappear.
- 3 Set CABLE and ANT/AUX according to the channel to be added or erased.

Channel	CABLE button	ANT/AUX button
VHF	OFF	Press so that "AUX" disappears.
UHF		
Cable TV	ON	Press so that "AUX" appears.
Pay cable TV		

ADDING CHANNELS

- 1 Press channel number button(s) and then ENTER to select the channel to be added.
- 2 Press ADD. A "+" appears for a moment to the left of the on-screen channel number display. This channel has now been added to the channel scan memory.

Repeat steps 1 and 2 for other channels to be added.



ERASING CHANNELS

- 1 Press the channel number button(s) and then ENTER to select the channel to be erased.
- 2 Press ERASE.

A “—” appears for a moment to the left of the on-screen channel number display. This channel has now been erased from the channel scan memory.

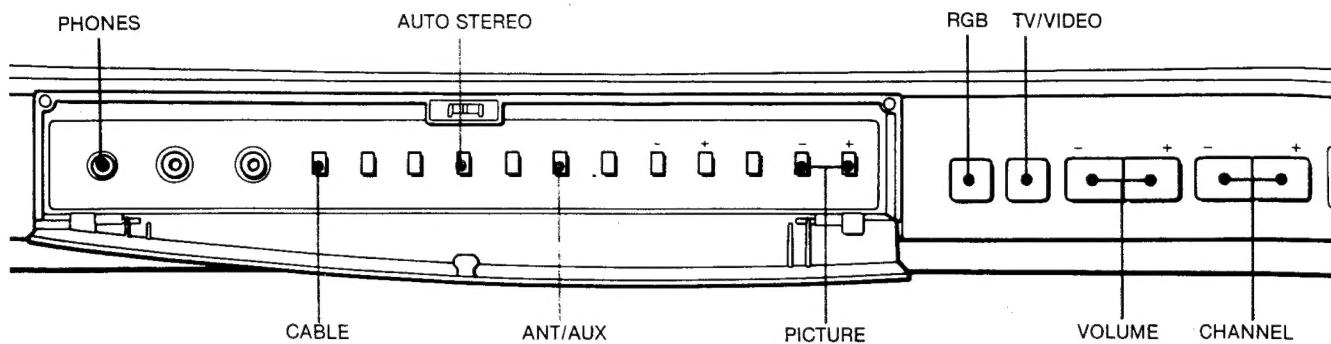
Repeat steps 1 and 2 for other channels to be erased.

To add erased channels again, follow the steps in “ADDING CHANNELS”.

Note

When a VHF or UHF channel is erased, the cable TV channel with the same number is also erased and vice versa.

1-3. OPERATION



PREPARATION

Receivable channels

VHF: 2-13

UHF: 14-69

Cable TV: 1-125

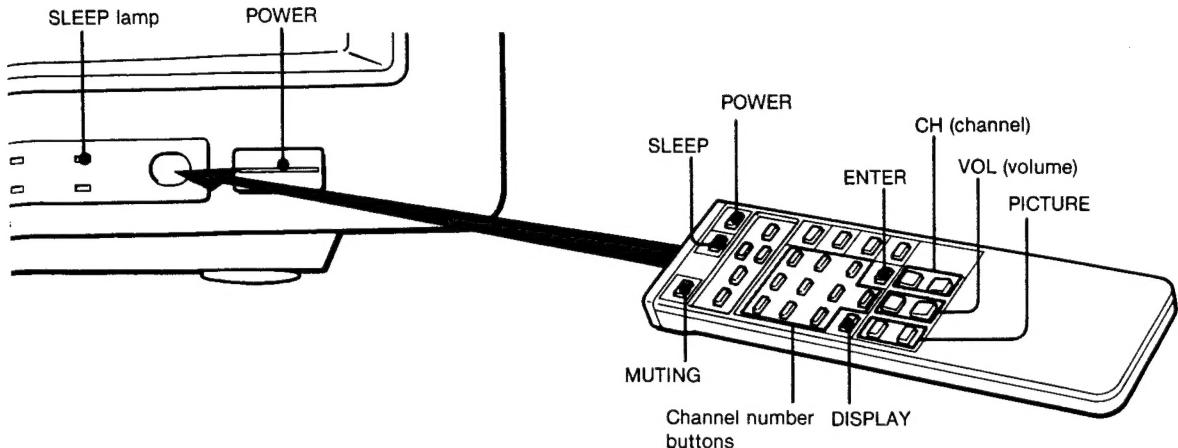
Cable TV channel chart*

Cable TV systems use letters or numbers to designate channels. To tune in a cable TV channel, refer to the chart below.

Check with your local cable TV company for more complete information on the available channels.

*The designation of the cable TV channels conforms to the EIA/NCTA recommendation.

Channel	CABLE button	ANT/AUX button
VHF	OFF	Press so that "AUX" disappears.
UHF		
Cable TV	ON	Press so that "AUX" appears.
Pay cable TV		



To select a channel directly

Press the channel number button(s), then press ENTER. For example, to select channel 125, press 1, 2, 5 and ENTER. If you have pressed the wrong number button and have not pressed ENTER yet, wait until the on-screen channel number display disappears. Then press the correct buttons.

To scan the channels in numerical sequence

Press CH +/-.

To adjust the volume

Press VOL +/-.

To adjust the picture contrast

Press PICTURE +/-.

If the picture rolls vertically

Turn V HOLD on the rear panel.

To keep the on-screen indications displayed

Press DISPLAY.

Press again to make them disappear.

To mute the sound immediately

Press MUTING. "MUTING" appears.

To restore the sound to its previous level, press it again or press VOL +.

To have the unit turn off automatically after one hour

Press SLEEP. "SLEEP" appears for a moment. The SLEEP lamp lights up and remains lit until the unit is turned off. To cancel the sleep timer, press SLEEP again so that the lamp goes off.

To turn off the unit

Press POWER again.

To listen with a pair of headphones

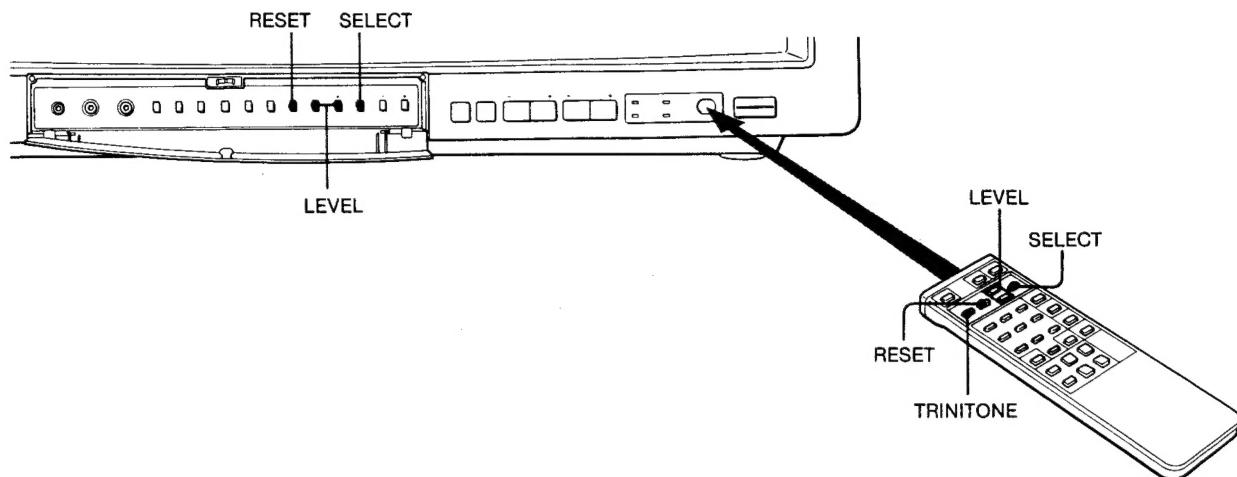
Connect the optional 8-ohm headphones to the PHONES jack (stereo mini-type).

The sound from the speakers will be cut off.

If your headphones have a stereo phone-type plug, use the optional PC-33 plug adaptor.

An earphone can also be connected to listen to the monaural (left channel) sound.

PICTURE AND SOUND ADJUSTMENTS



The following elements may be adjusted to suit individual tastes.

Picture: HUE, COLOR, BRIGHT (brightness), SHARP (sharpness)

Sound: TREBLE, BASS, BALANCE

- 1 Press SELECT repeatedly until the element to be adjusted appears on the screen.
- 2 Press LEVEL +(R)/-(L) to adjust the selected element.

A segmented color bar appears to indicate the level of adjustment.

Selected element	LEVEL buttons	
	- (L) button	+ (R) button
HUE ←	Skin tone becomes purplish. The red segments increase.	Skin tone becomes greenish. The green segments increase.
↓		
COLOR	less color intensity	more color intensity The red segments increase.
↓		
BRIGHT	less brightness	more brightness The green segments increase.
↓		
SHARP	less sharpness	more sharpness The green segments increase.
↓		
TREBLE	less treble response	more treble response The green segments increase.
↓		
BASS	less bass response	more bass response The green segments increase.
↓		
BALANCE	The left speaker's output is emphasized. The green segments increase.	The right speaker's output is emphasized. The red segments increase.

To adjust the tint (color temperature) of the picture

Press TRINITONE. "WHITE" appears.

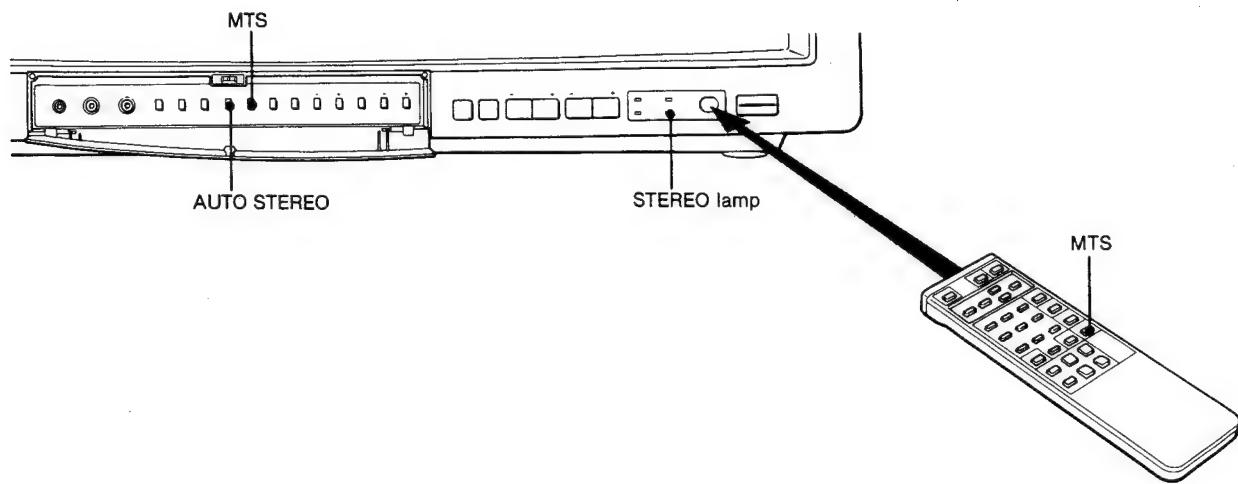
Consecutive press of TRINITONE adjusts the picture as follows.

Color of "WHITE"	Adjustment
blue ←	The white part of the picture becomes bluish.
↓	
red	The white part of the picture becomes reddish.
↓	
white →	The factory-set whiteness is restored.

To reset the elements to the factory-set levels

Press RESET. "RESET" appears for a moment.

LISTENING TO MULTICHANNEL TV SOUND (MTS) BROADCASTS



To receive a stereo broadcast

Normally, keep AUTO STEREO at the ON position. The STEREO lamp lights up whenever a stereo broadcast is received. To listen to this broadcast, press MTS so that "MAIN" appears.

To listen to a Second Audio Program (SAP) broadcast

Press MTS so that "SAP" appears.

To listen to both MAIN and SAP broadcasts

Press MTS so that "BOTH" appears. The MAIN and SAP sounds are emitted from the left and right speakers respectively. The MAIN sound becomes monaural even if it is a stereo broadcast.

Notes

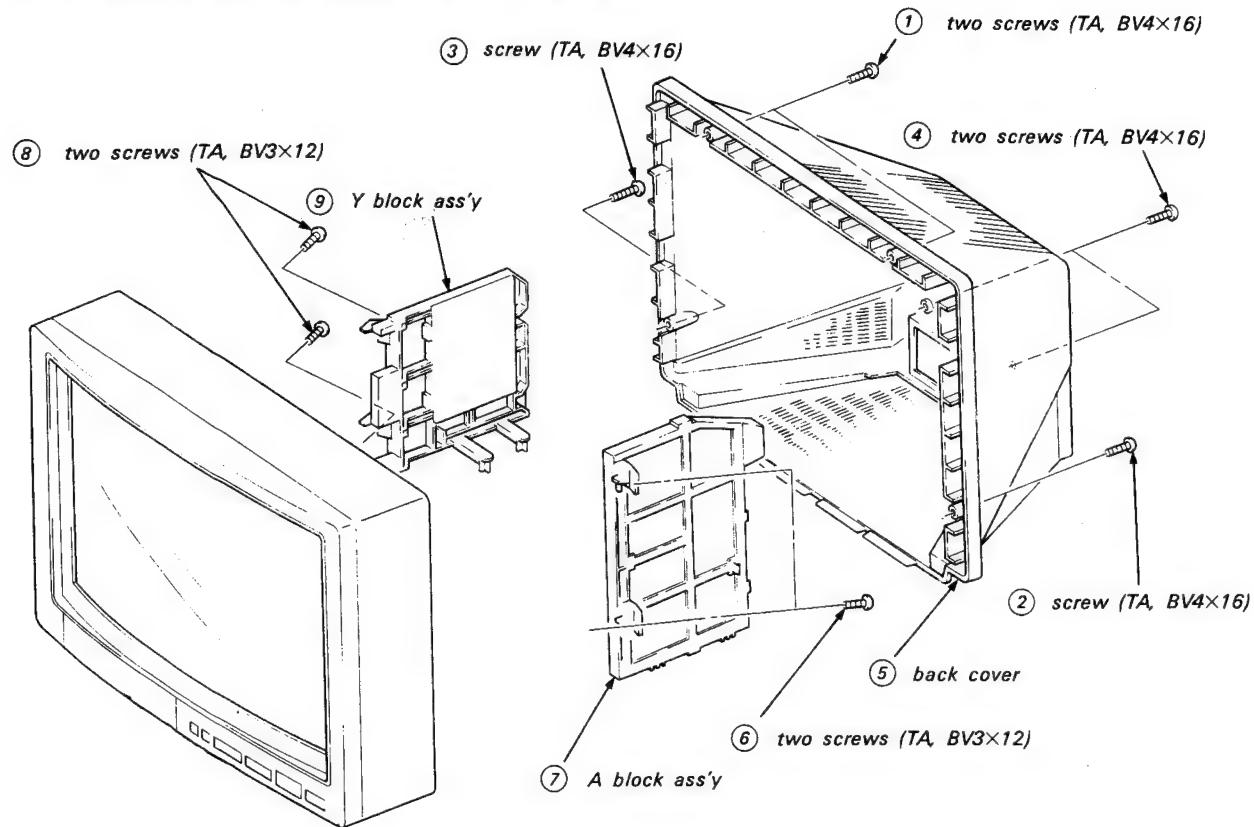
- Excessive noise may be heard during a stereo broadcast as a result of weak signals. In this case, set AUTO STEREO to OFF. The sound becomes monaural but the noise should be eliminated.
- If the SAP mode is selected when in fact there is no SAP broadcast, no sound is heard.
- Consecutive press of MTS changes the on-screen indication as follows.

MAIN → SAP → BOTH

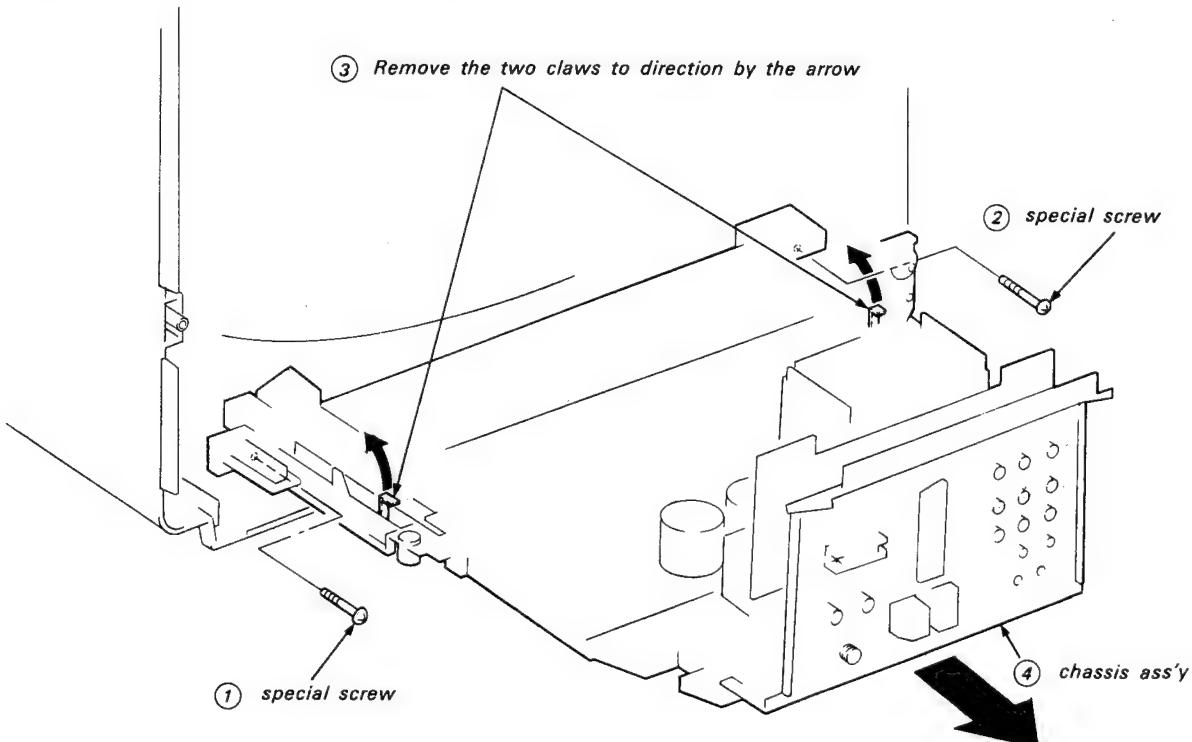
SECTION 2 DISASSEMBLY

Note: Follow the disassembly procedure in the numerical order given.

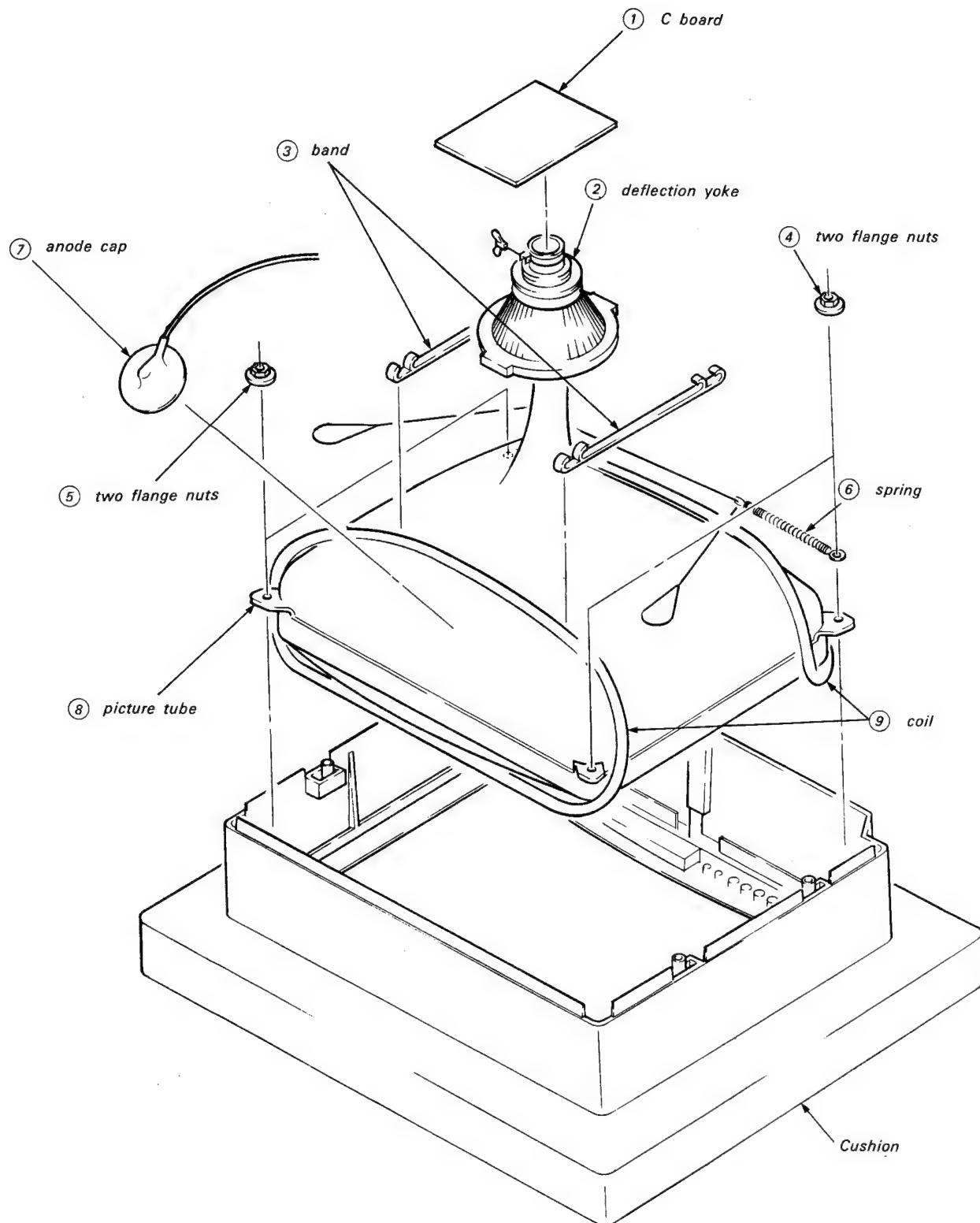
2-1. BACK COVER, Y BLOCK ASSEMBLY REMOVAL



2-2. CHASSIS ASSEMBLY REMOVAL

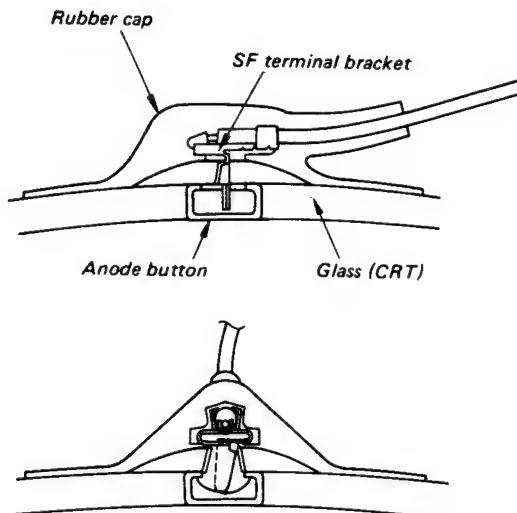
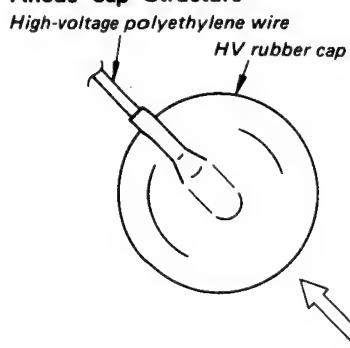


2-3. PICTURE TUBE REMOVAL



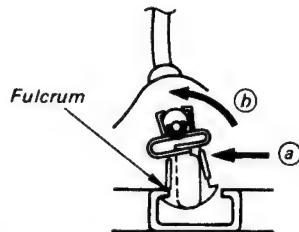
2-4. REMOVAL OF ANODE CAP

• Anode Cap Structure



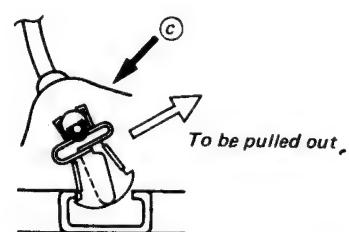
Cross section viewed from the arrow A

• Removal of SF Terminal



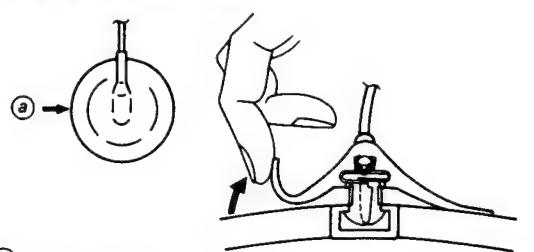
When pushing in the direction indicated by the arrow **a**, the SF terminal tilts toward the fulcrum side due to the spring characteristic.

Remove it by pulling up in the direction indicated by the arrow **b** with the SF terminal tilted.

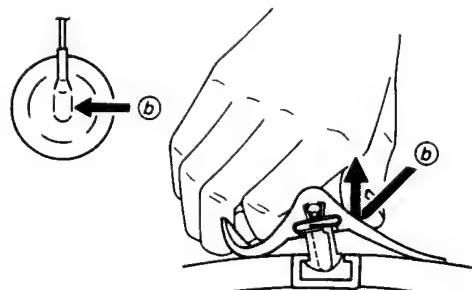


Tilt the SF terminal in the direction of the arrow **c** and pull out it in the direction (of 45°) indicated by the arrow.

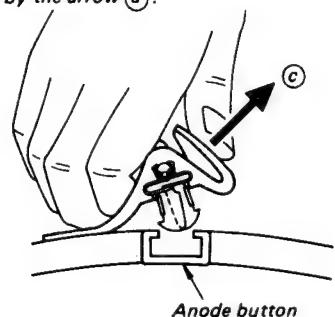
• Removing Procedures



① Turn up one side of the rubber cap in the direction indicated by the arrow **a**.



② Using a thumb, pull up the rubber cap firmly in the direction indicated by the arrow **b**.



③ When one side of the rubber cap is separated from the anode button, the anode cap can be removed by turning up the rubber cap and pulling up it in the direction of the arrow **c**.

SECTION 3

SET-UP ADJUSTMENTS

- The following adjustments should be made when a complete realignment is required or a new picture tube is installed.
- These adjustments should be performed with rated power supply voltage unless otherwise noted.

Controls and switch should be set as follows unless otherwise noted:

PICTURE control MAXIMUM

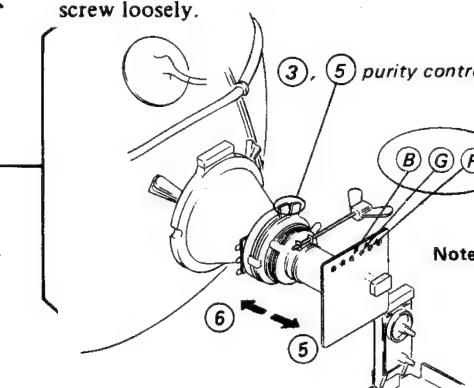
BRIGHTNESS control MAXIMUM

3-1. BEAM LANDING

Preparation:

- Feed in the white pattern.
- Before starting, degauss the entire screen.

- Turn on set power supply and receive an all-white signal.
- Evenly degauss the entire screen.
- Loosen the deflection yoke mounting screw, and set the purity control to the center as shown in Figure 3-1.
- Set BKG VR **R** to maximum and set **B** and **G** to minimum.
- Move the deflection yoke back, and adjust the purity control so that **R** is in the center and **G** and **B** are at the sides, evenly. (Figure 3-2.)
- Move the deflection yoke forward so that the entire screen is red.
- If the deflection yoke is pushed all the way to the CRT then moved slightly back, landing adjustment is easier.
- Substitute **G**, then **B** for **R** in step 4 and check landing.
- Rotate **R**, **G** and **B** once each and check landing.
- When landing is not right, adjust the purity control and use magnets as shown in Figure 3-3, then repeat steps 7 and 8.
- When a magnet is used, be sure to perform step 2, and tighten deflection yoke mounting screw loosely.



Perform the adjustments in order as follows:

- Beam Landing
- Convergence
- White Balance

Note: Test Equipment Required.
1. Color-bar/Pattern Generator
2. Degausser

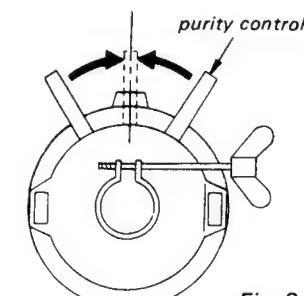


Fig. 3-1.

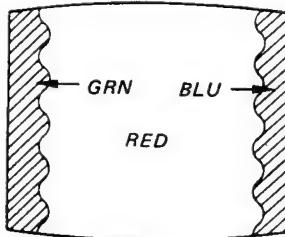


Fig. 3-2.

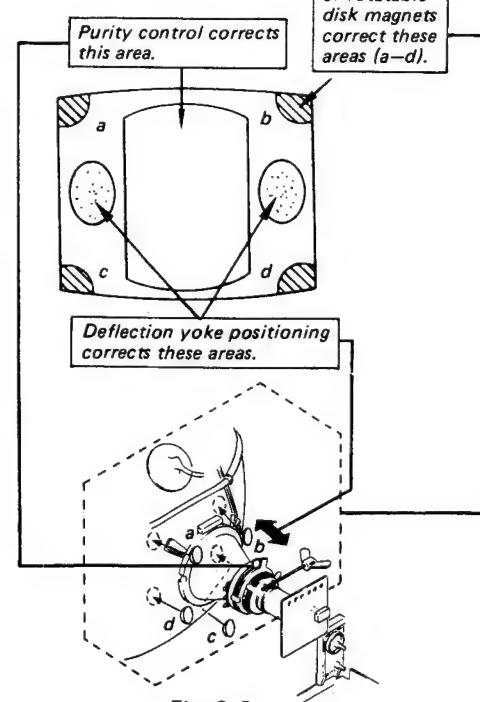


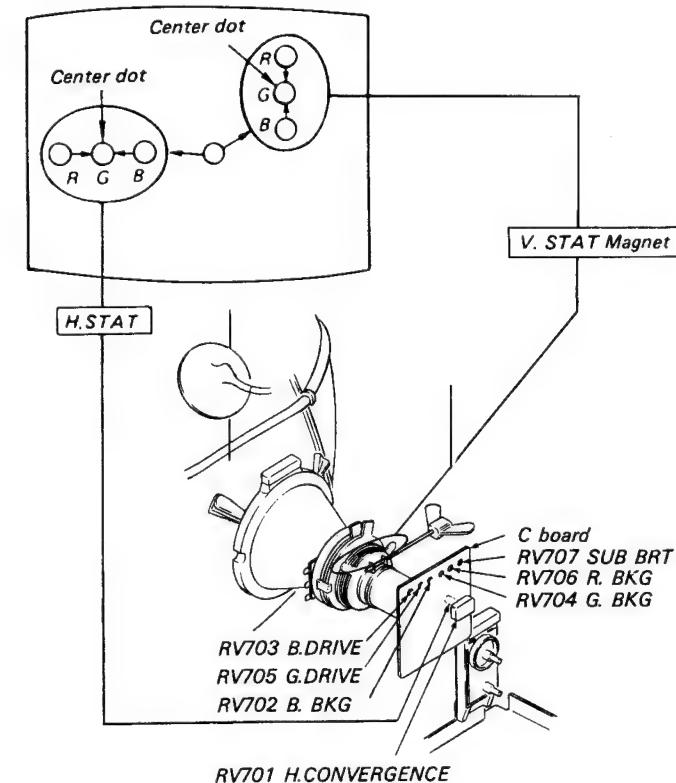
Fig. 3-3.

3-2. CONVERGENCE

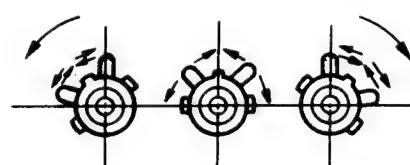
Preparation:

- Before starting, perform FOCUS, H. SIZE, V. SIZE and V. LIN adjustments.
- Set BRIGHTNESS control to fully counterclockwise.
- Feed in the dot pattern.

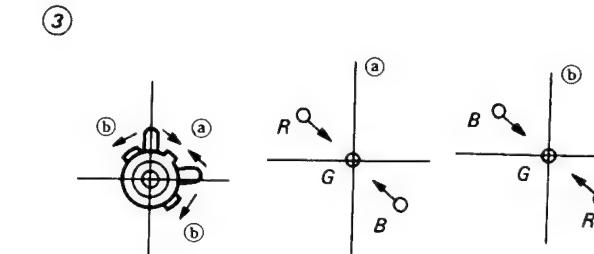
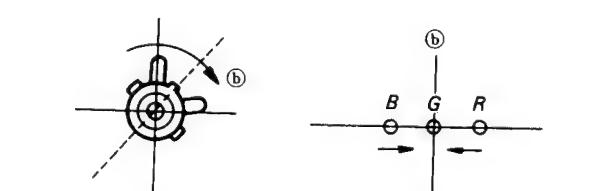
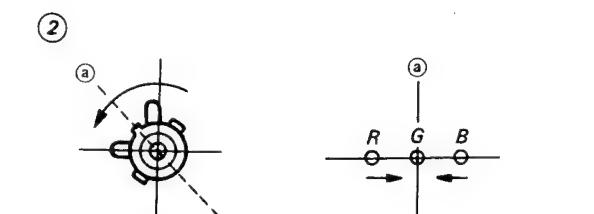
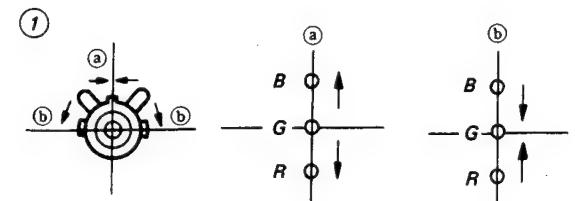
(1) Horizontal and Vertical Static Convergence



- Adjust H. STAT VR to coincide red, green and blue dots on the center of screen (Horizontal movement)
- Adjust V. STAT magnet to coincide red, green and blue dots on the center of screen (Vertical movement)
- If the red, green and blue dots do not coincide on the center of screen with H. STAT VR, perform horizontal convergence adjustment using H. STAT VR and V. STAT magnet as shown below. (In this case, H. STAT VR and V. STAT magnet effect each other.)
- Tilt the V. STAT magnet and adjust static convergence to open or close the V. STAT magnet.



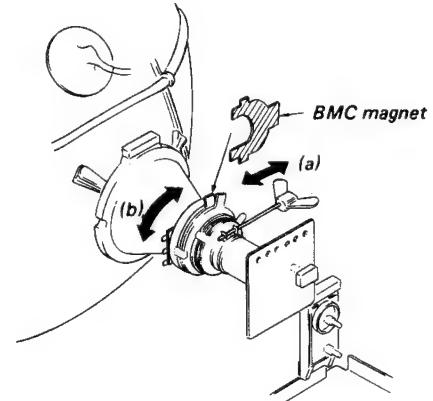
- When the V. STAT magnet is moved in the direction of arrow **a** and **b**, Red, Green and Blue dots move as shown below.



If blue dot does not coincide with red and green dots, perform following steps.

Move BMC magnet (a) to correct insufficient H. static convergence.
Rotate BMC magnet (b) to correct insufficient V. static convergence.

In either case, repeat Beam Landing Adjustment.

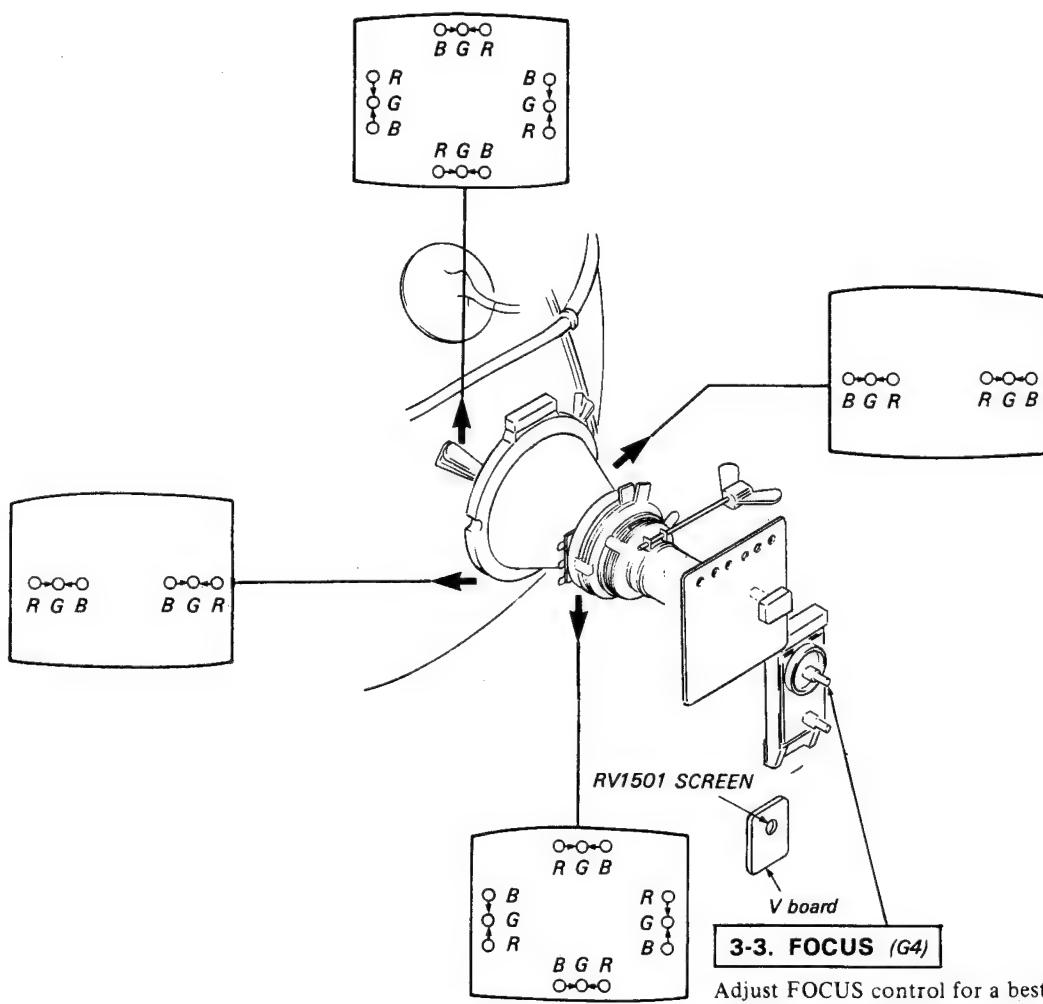
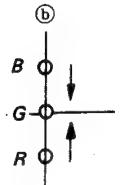


(2) Dynamic Convergence Adjustment

Preparation:

- Before starting, perform Horizontal and Vertical Static Convergence Adjustment.

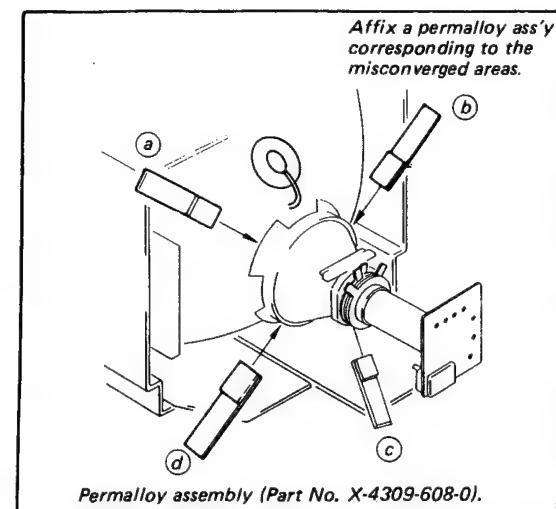
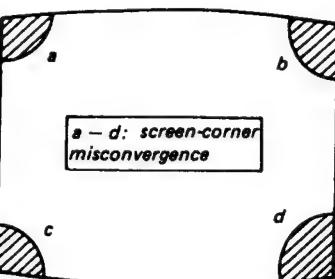
1. Loosen deflection yoke screw.
2. Remove deflection yoke spacers.



3. Move the deflection yoke for best convergence as shown below.

4. Tighten the deflection yoke screw.
5. Install the deflection yoke spacers.

(3) Screen-corner Convergence



Permalloy assembly (Part No. X-4309-608-0).

3-4. WHITE BALANCE

Feed in the cross-hatch pattern.

1. Turn BRIGHTNESS and PICTURE controls to maximum.
2. Turn RV703 (B. DRIVE) and RV705 (G. DRIVE) fully counterclockwise.
3. Set RV706 (R. BKG), RV704 (G. BKG), and RV702 (B. BKG) to fully counterclockwise.
4. Turn RV1501 (SCREEN) slowly to obtain a faintly visible cross-hatch. Note the color that first becomes visible by turning RV1501. Do not turn a BKG control for this color.
5. Adjust the other two BKG controls for best white balance (neutral gray) of the faint cross-hatch.
6. Turn BRIGHTNESS and PICTURE controls fully counterclockwise. Observe the screen and adjust the DRIVE controls for best white balance.
7. Repeat Steps 1 through 6 several times.

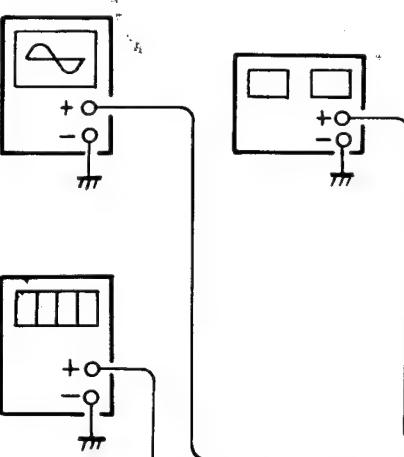
RGB Adjustment

1. Connect a microcomputer to the digital RGB connector.
2. Press the RGB button to set it into "RGB" mode.
3. Set the PICTURE control to minimum position, and BRIGHT control to the standard one.
4. Display characters on the entire screen, and set the SUB BRIGHT (RV401 and RV402), and RGB SUB BRIGHT (RV403) controls to their 50% positions respectively.
5. Adjust the white balance by turning the SUB BRIGHT (RV401 and RV402) controls so that the displayed characters become white.
6. Adjust roughly by turning the RGB SUB BRIGHT (RV403) control so that the darkest part of raster becomes cut off.

SECTION 4
CIRCUIT ADJUSTMENTS
4-1. A BOARD ADJUSTMENTS

KV-20XBR II
RM-724/APM-X4

KV-20XBR II
RM-724/APM-X4



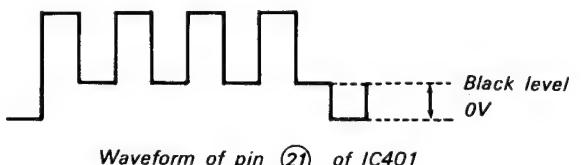
BAR DISPLAY POSITION ADJUSTMENT

- (1) Receiver the broadcasting signal.
- (2) Press the picture button so that the received signal becomes maximum.
- (3) At this point, adjust the undisplayed portions of the left and right sides of the bar signal so as to become equal with L102.

L102
CHR
POSITION

BLACK LEVEL ADJUSTMENT

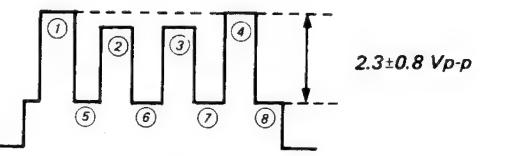
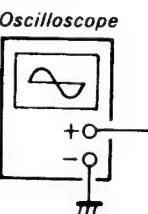
- (1) Receive color bar signal.
- (2) Set the analog level of the microcomputer to the standard.
- (3) Add 6V DC to pin ⑥ (SUB BRT terminal) of A-16 connector.
- (4) Adjust the black level volume (RV406) so as to the voltage of pin ⑫ of IC401 (black level terminal) becomes equal to the black level waveform of Pin ⑬ of IC401.



(Caution) The black level of pin ⑬ waveform of IC401 should be equal to the pedestal level. In addition, the voltage of pin ⑫ of IC401 should not be higher than that of the black level.

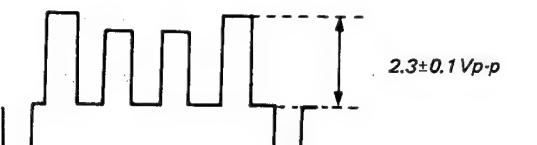
ACC ADJUSTMENT AND HUE ADJUSTMENT

- (1) Receive color bar signal.
- (2) HUE 50% (resetting)
COLOR THICKNESS 50% (resetting)
PICTURE Maximum
- (3) Connect pin ⑩ of IC301 to 12V line (pin ⑩ of IC301) with a 47KΩ resistor.
- (4) Observe pin ⑬ of IC401 with an oscilloscope, and adjust the output waveform so as to become that as shown in the diagram by turning the ACC volume (RV304) and Hue volume (RV303).

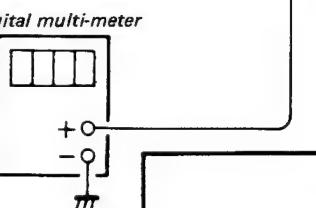


Make levels of ① to ④ even.
(⑤ to ⑧ have a little residual tilt.)

- (5) Confirm that the voltage at the middle point of the ACC volume (RV304) should be less than 9V.
- (6) Confirm that the blue output should be 2.3 ± 0.1 Vp-p after adjusted.

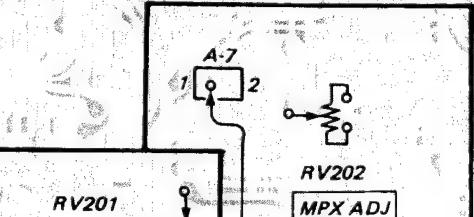


(Caution) Measurement should be performed under the conditions that removing A-16 connector and not applying ABL

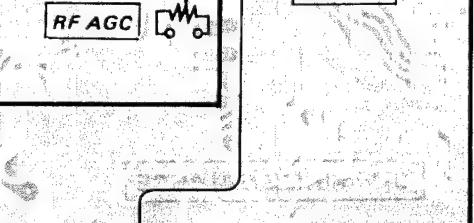


RF AND AGC ADJUSTMENT (ROUGH ADJUSTMENT)

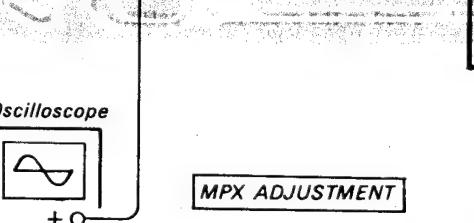
- (1) Adjust with RV201 (RF AGC) so as to disappear snow noise and cross-modulation.
- (2) Confirm them at every channel.



RV201
RF AGC

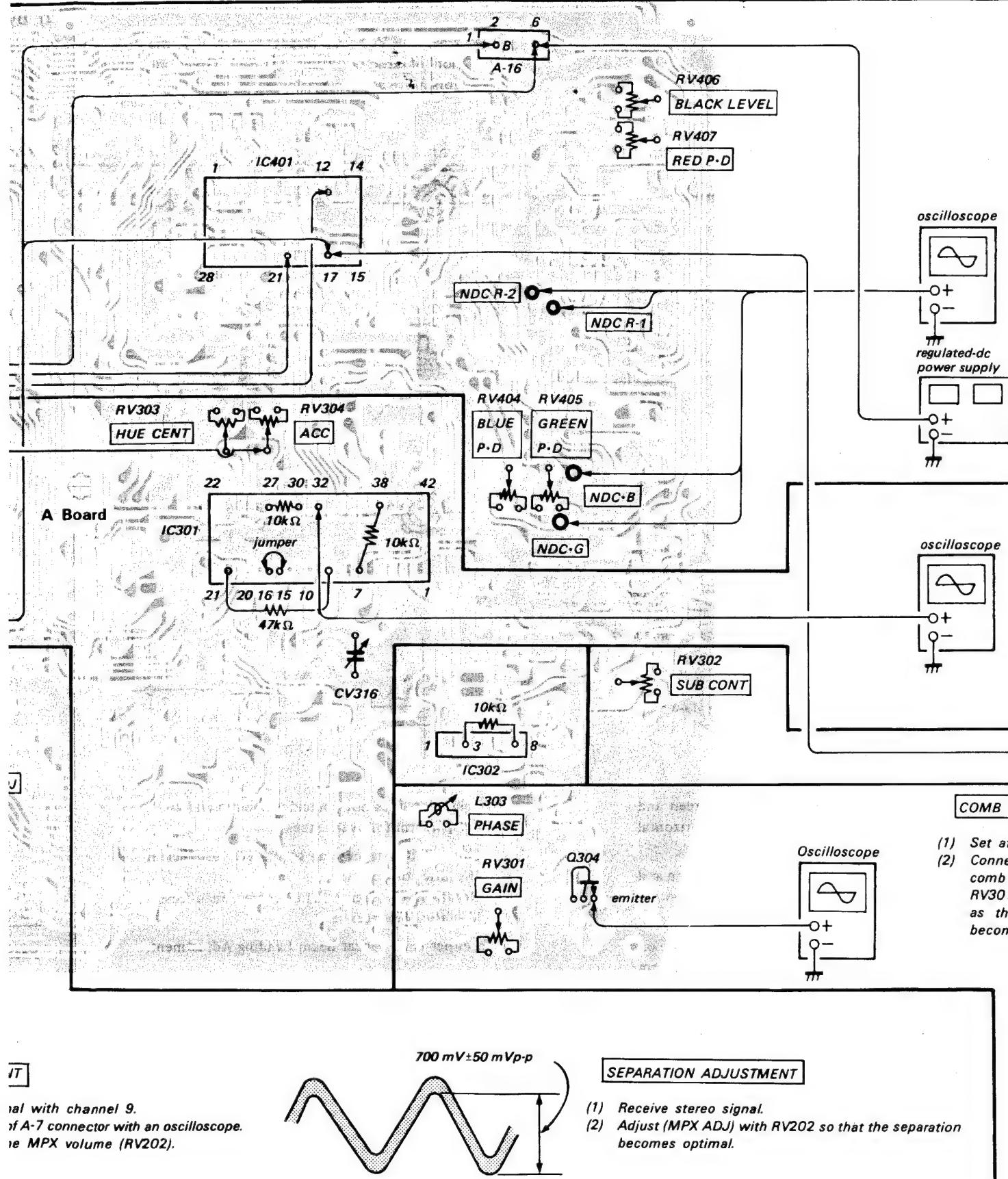


RV202
MPX ADJ



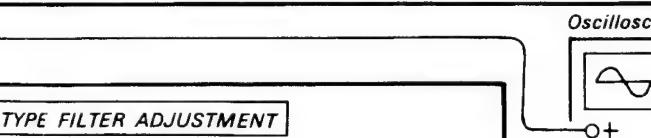
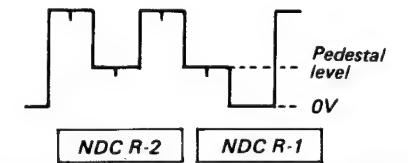
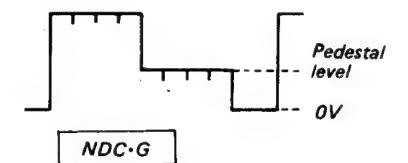
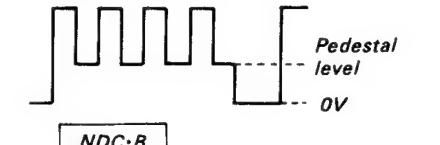
MPX ADJUSTMENT

- (1) Receive dot signal with channel 9.
- (2) Observe pin ① of A-7 connector with an oscilloscope.
- (3) Adjust it with the MPX volume (RV202).



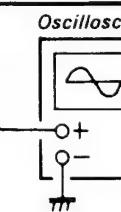
N. DYNAMIC COLOR ADJUSTMENT

- Receive color bar signal.
- N.D.C Blue ON state
PICTURE VOLUME Minimum
BRIGHTNESS VOLUME 50% (resetting)
- Watch the potential at the points of NDC.B and NDC.G to the pedestal at the point of NDCR-2 with RV404 (BLUE P.D) and RV405 (GREEN P.D), and adjust so that the input level offset becomes disappear.
- Apply 6V DC to pin 6 of A-16 connector (SUB BRT), and adjust the pedestal levels at the points of NDC.R-1 and NDC R-2 so as to they become the same level with RV407 (RED P.D).
- Switch the NDC at green and red, and confirm that there have been no differences in adjustments.



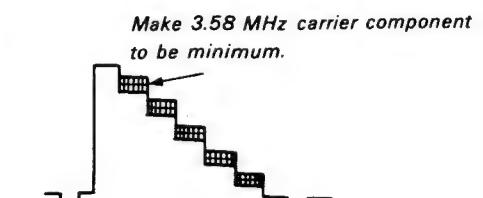
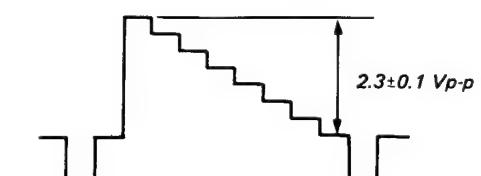
14.3 MHz • fo ADJUSTMENT

- Receive color bar signal.
- HUE VOLUME 50%
COLOR THICKNESS VOLUME... 50% Resetting
PICTURE VOLUME 70%
- Connect pin 30 of IC301 to GND through via 10 k Ω resistor.
- Connect pin 38 of IC301 to 12V via 10 k Ω resistor.
- Short pins 15 and 16 of IC301.
- Observe pin 32 of IC301 with an oscilloscope, and confirm that the color signal is out of synchronization.
- Turn CV316 to make color synchronization.



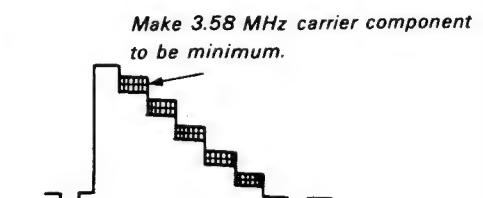
SUB-CONTRAST ADJUSTMENT

- Receive color bar signal.
- COLOR PICTURE VOLUME Maximum
COLOR THICKNESS VOLUME Minimum
- Adjust the waveform of pin 17 of IC401 to that as shown in the diagram with RV302 (SUB CONT)



COMB TYPE FILTER ADJUSTMENT

- Set at TV mode and receive color bar signal.
- Connect an oscilloscope to the Y signal output of the comb type filter (the emitter of Q304), and adjust RV301 (GAIN) and L303 (PHASE) taking tracking, so as the chroma component of the waveform to becomes minimum.

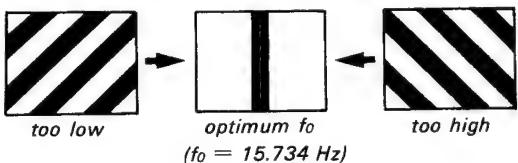


IT
rial with channel 9.
if A-7 connector with an oscilloscope.
e MPX volume (RV202).

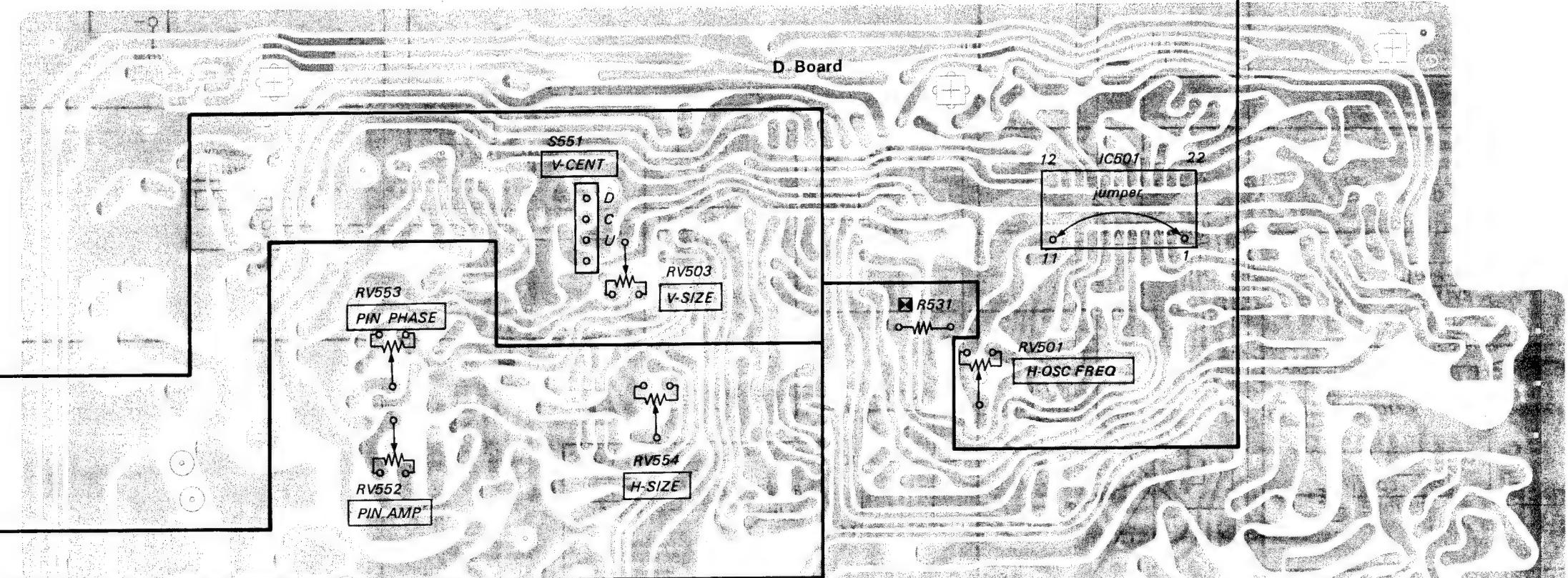
4-2. D BOARD ADJUSTMENTS

H-FREQUENCY ADJUSTMENT

- (1) Connect pin ① and pin ⑪ of IC501.
- (2) Connect pin ③ of A board to 12V line (pin ⑧ of IC302) with a resistor of $10\text{ k}\Omega$.
- (3) Adjust the picture flow with H-frequency(RV501) so that it will become as shown below.



- (4) Return steps (1) and (2) to their original states, and confirm that H-sync is normal and the picture does not become disordered even if the channels are switched over.

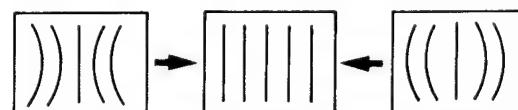


V-SIZE ADJUSTMENT (ROUGH ADJ.)

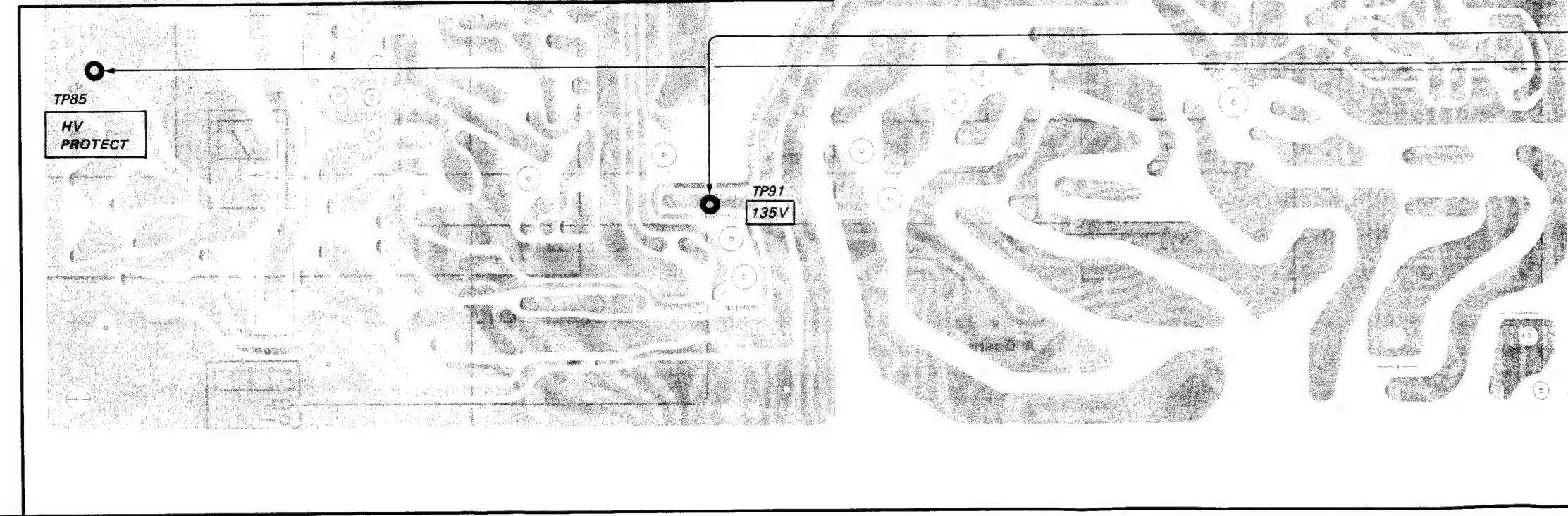
Adjust V-SIZE with the V-SIZE VR (RV503) so that it will become 11.8 ± 0.15 frames.

LEFT AND RIGHT PIN DISTORTION ADJUSTMENT (ROUGH ADJ.)

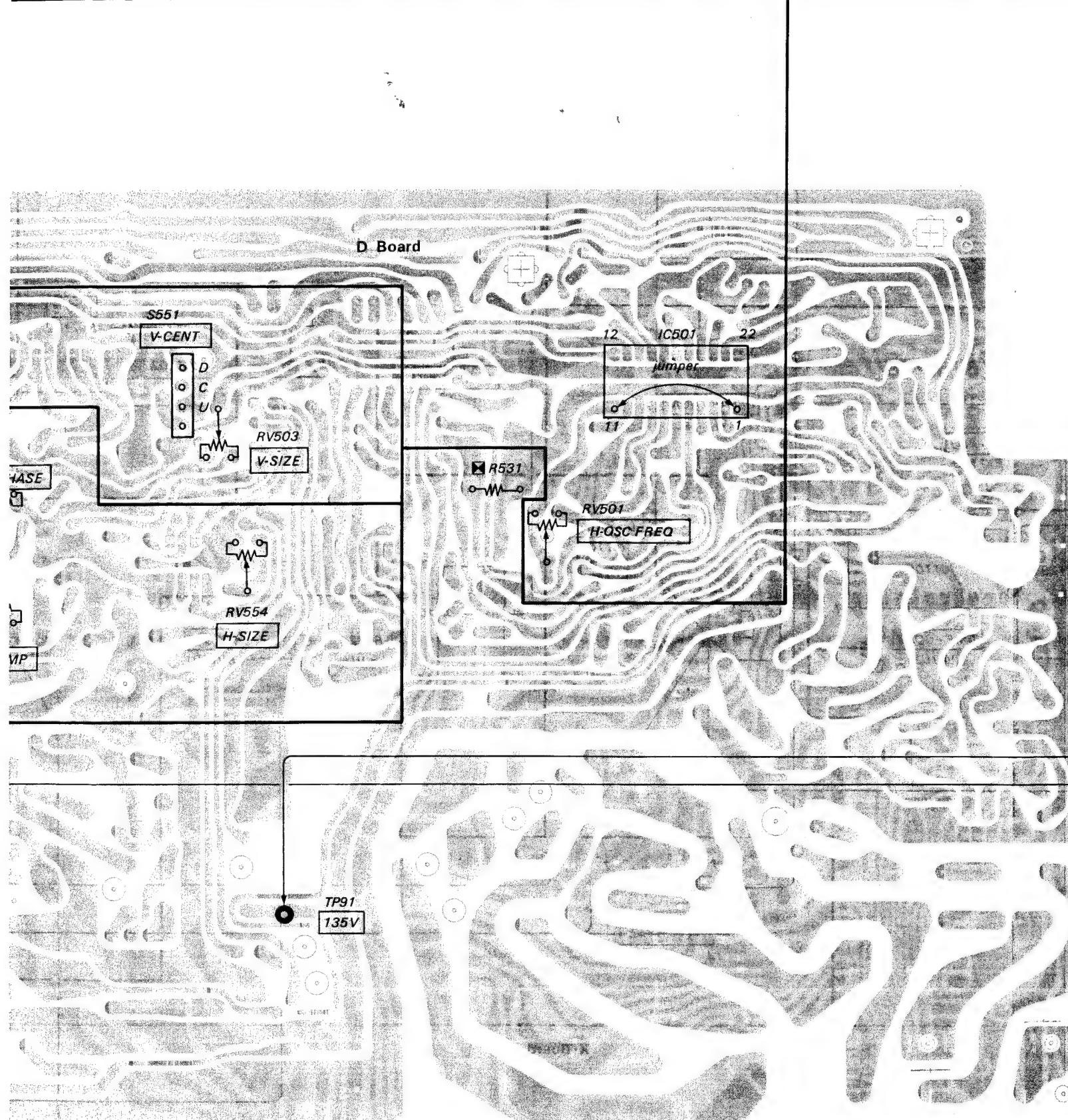
- (1) Adjust the H-SIZE with the H-SIZE VR(RV554) so that it will become 15.8 ± 0.15 frames.
- (2) Adjust PIN AMP VR (RV552) to make vertical lines straight as shown below.



- (3) Adjust PIN PHASE VR(RV553) to make vertical lines straight as shown below.



4-3. SAFETY RELATED ADJUSTMENTS



R531 CONFIRMATION METHOD (HOLD-DOWN CONFIRMATION) AND READJUSTMENTS

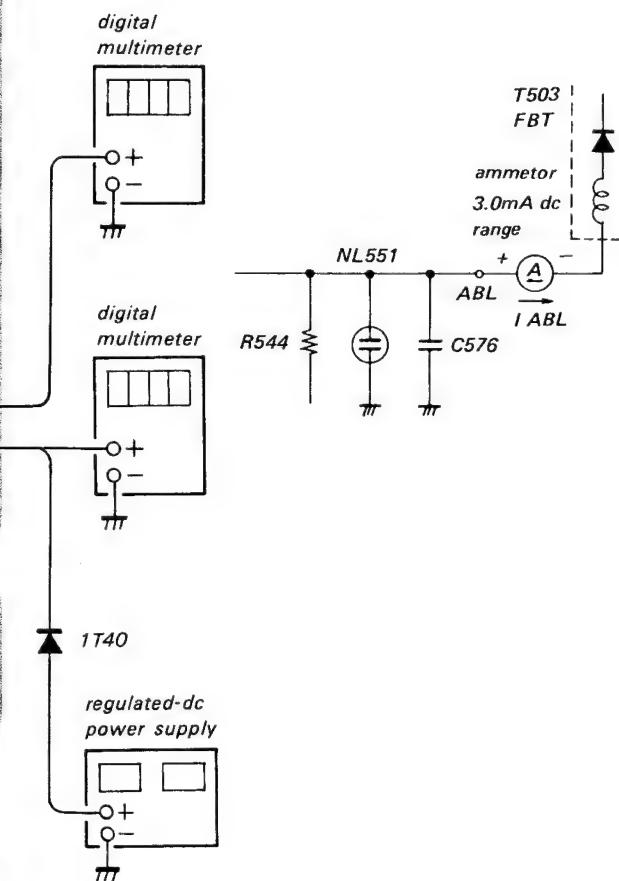
When replacing the following components (marked with in the schematic diagram), always perform the adjustment as follows:
D507, D508, D510, IC501, Q503, Q504, R427, R431, R437, R438, R512, R519, R529, R530, R531, R532, R533, R534, R542, R544

(1) Preparation before confirmation

- 1) Turn the POWER switch ON, and receive entirely white signals and set the PICTURE and BRIGHT controls to maximum.
- 2) Confirm that the voltage of TP85 is more than 12.96V when the set is operating normally with AC 120V supply.

CHECK AFTER IC651, R657 REPLACEMENT

- 1) Supply 130V ac to with variable auto-transformer.
- 2) Tune in an off-air signal.
- 3) Set the PICTURE and BRIGHT controls in to the RESET state.
- 4) Confirm the voltage of TP91 is less than 137.40V dc.
- 5) If step 4) is not satisfied, replace IC651 and R657 on GB board and repeat above steps.



(2) Hold-down operation confirmation

- 1) Turn the POWER switch ON, and receive entirely white signals, and adjust ABL current to $1500 \pm 20 \mu\text{A}$ with PICTURE, BRIGHT, etc. controls.
- 2) Apply DC voltage of over 12.96V gradually to TP85 via 1T40 from the DC stabilized power source. Confirm that the minimum voltage is less than 17.85 Vdc whereby the raster disappears during operation of the holddown circuit.

Note: When the hold-down circuit starts operating, switch OFF the power of the set immediately.

- 3) Turn the POWER switch ON, and receive dot signals and adjust ABL current to $180 \pm 5 \mu\text{A}$ with PICTURE, BRIGHT, etc. controls.

- 4) Apply DC voltage of over 12.96V gradually to TP85 via 1T40 from the DC stabilized power source. Confirm that the minimum voltage is less than 18.90Vdc whereby the raster disappears during operation of the holddown circuit.

Note: When the hold-down circuit starts operating, switch OFF the POWER of the set immediately.

(3) Hold-down readjustment

When step (2) is not satisfied, readjustment should be performed by altering the resistance value of R531 (a component marked with).

(4) Confirmation of hold-down erroneous operation

- 1) Turn the POWER switch ON, and receive dot signals and set the PICTURE and BRIGHT controls to minimum.
- 2) Confirm that the hold-down circuit does not operate by turning the POWER switch ON and OFF repeatedly several times.

Note: If the hold-down circuit starts operating in the above case, switch OFF the POWER of the set immediately.

- 3) Turn the POWER switch ON, and receive dot signals and entirely white signals, and set the PICTURE and BRIGHT controls to maximum.

- 4) Confirm that the hold-down circuit does not operate by performing switchover of the channels of dot signals and entirely white signals several times.

Note: If the hold-down circuit starts operating in the above case, switch OFF the POWER of the set immediately.

- 5) If the above-mentioned steps 1) to 4) are not satisfied, reconfirm steps (2) and (4) by altering the R531 smaller resistance value(a component marked with).

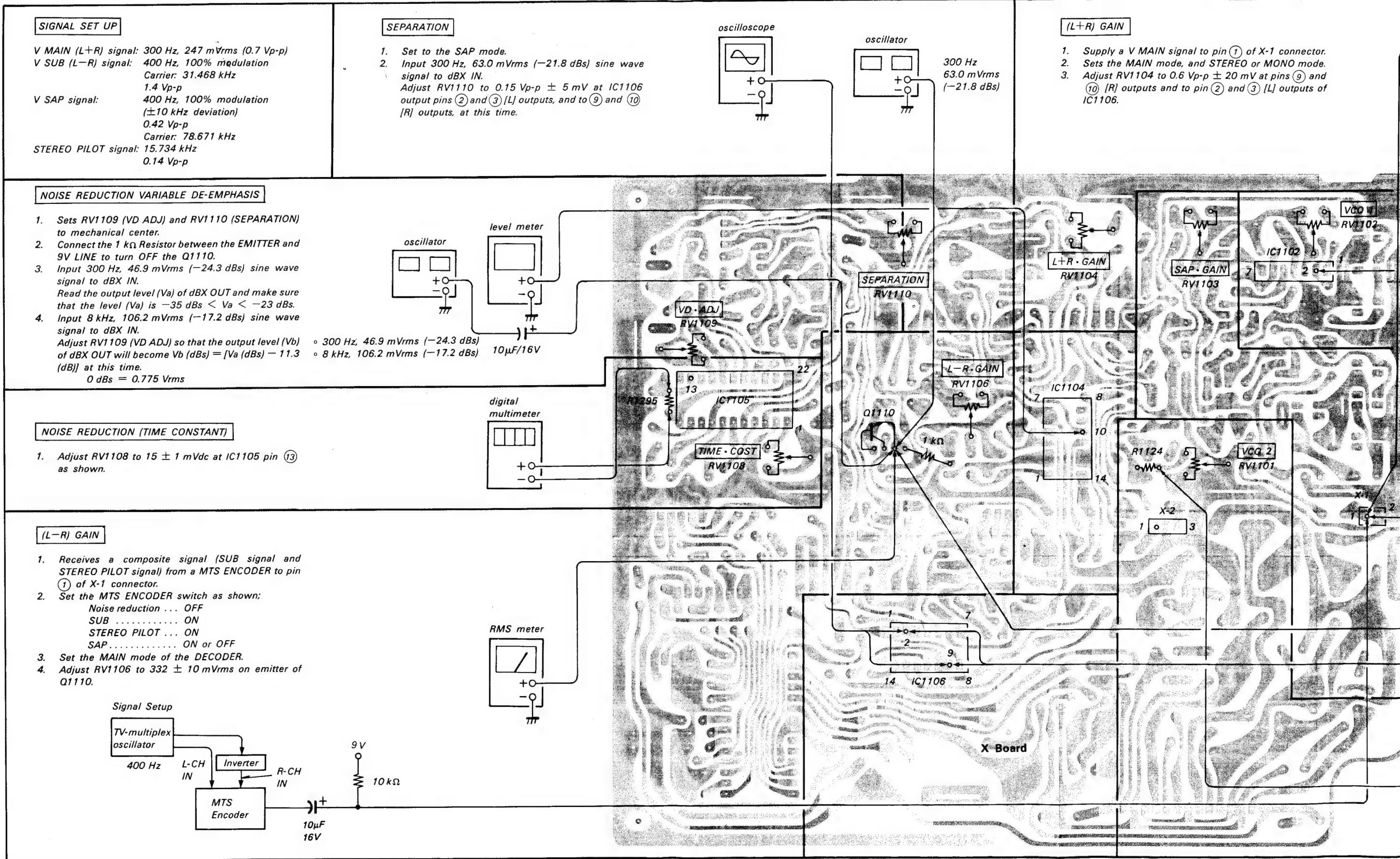
CONFIRMATION WHEN REPLACING T503 (FLY-BACK TRANSFORMER)

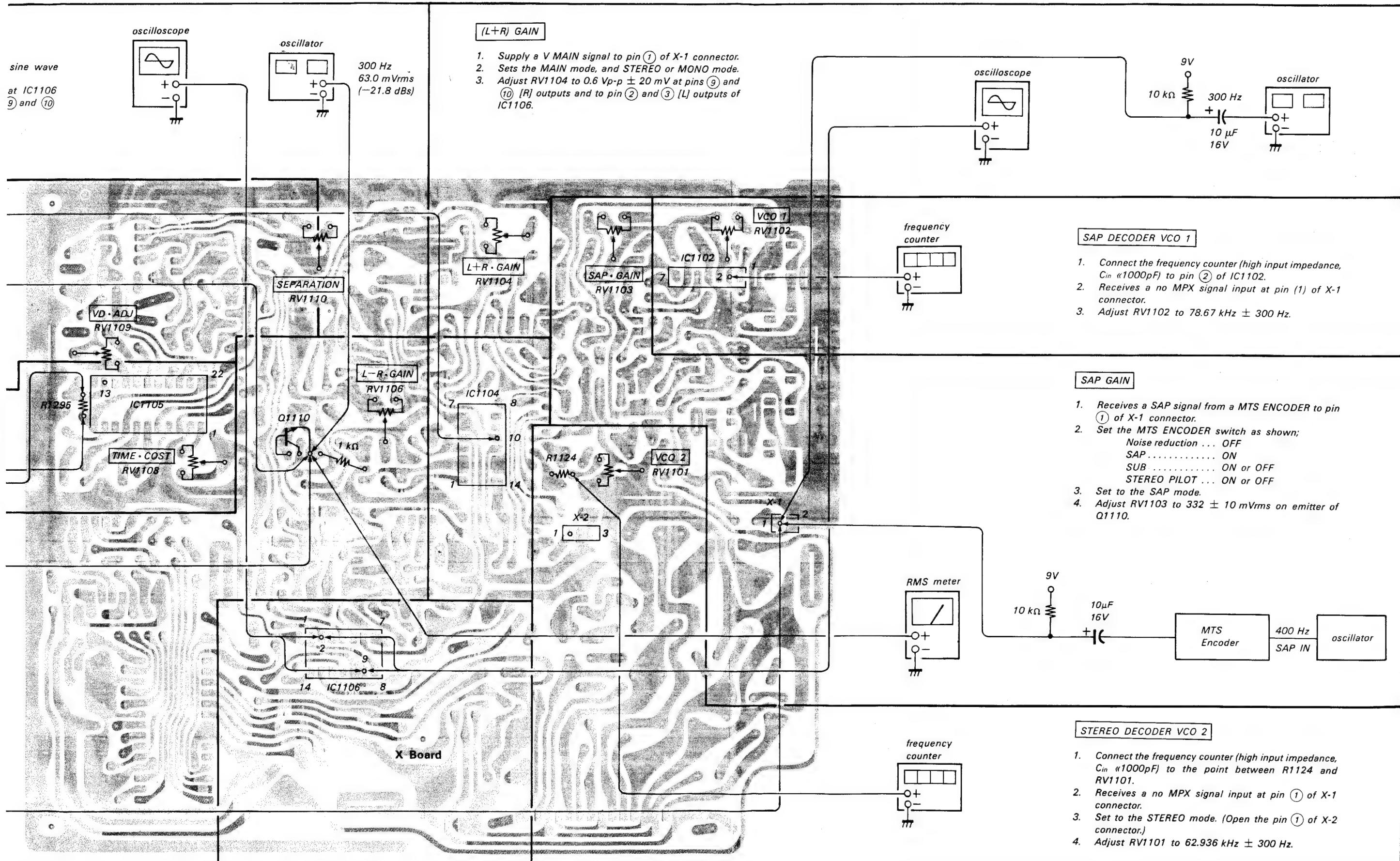
When replacing T503 (Fly-back transformer), the following confirmations should be performed with reference to whether an X-ray radiation control circuit is connected or not.

(1) Connection confirmation

- 1) Turn the POWER switch ON, and receive entirely white signals and set the PICTURE and BRIGHT controls to maximum.
- 2) When the set is operating normally with AC 120V supply, confirm that the voltage of TP85 is over 12.96 Vdc.

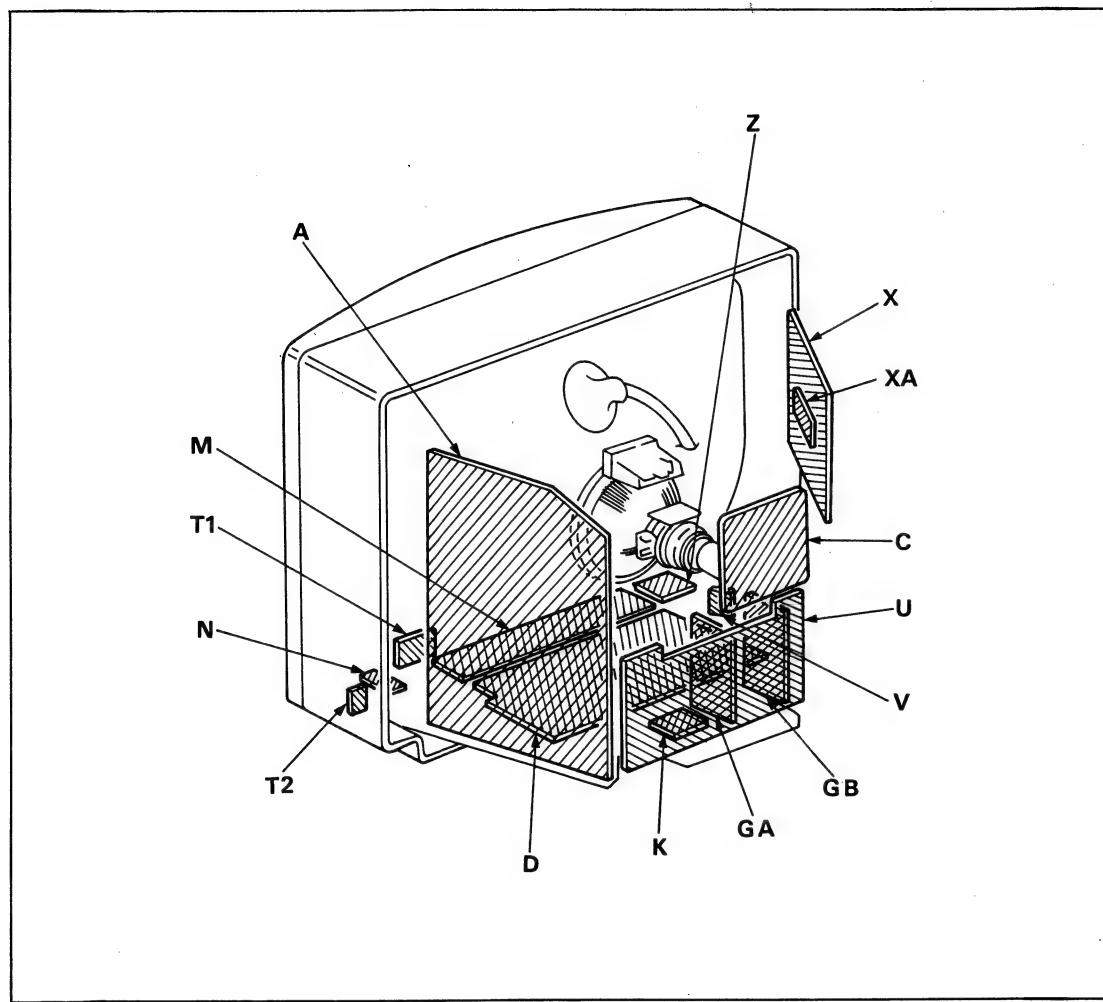
4-4. X BOARD ADJUSTMENTS



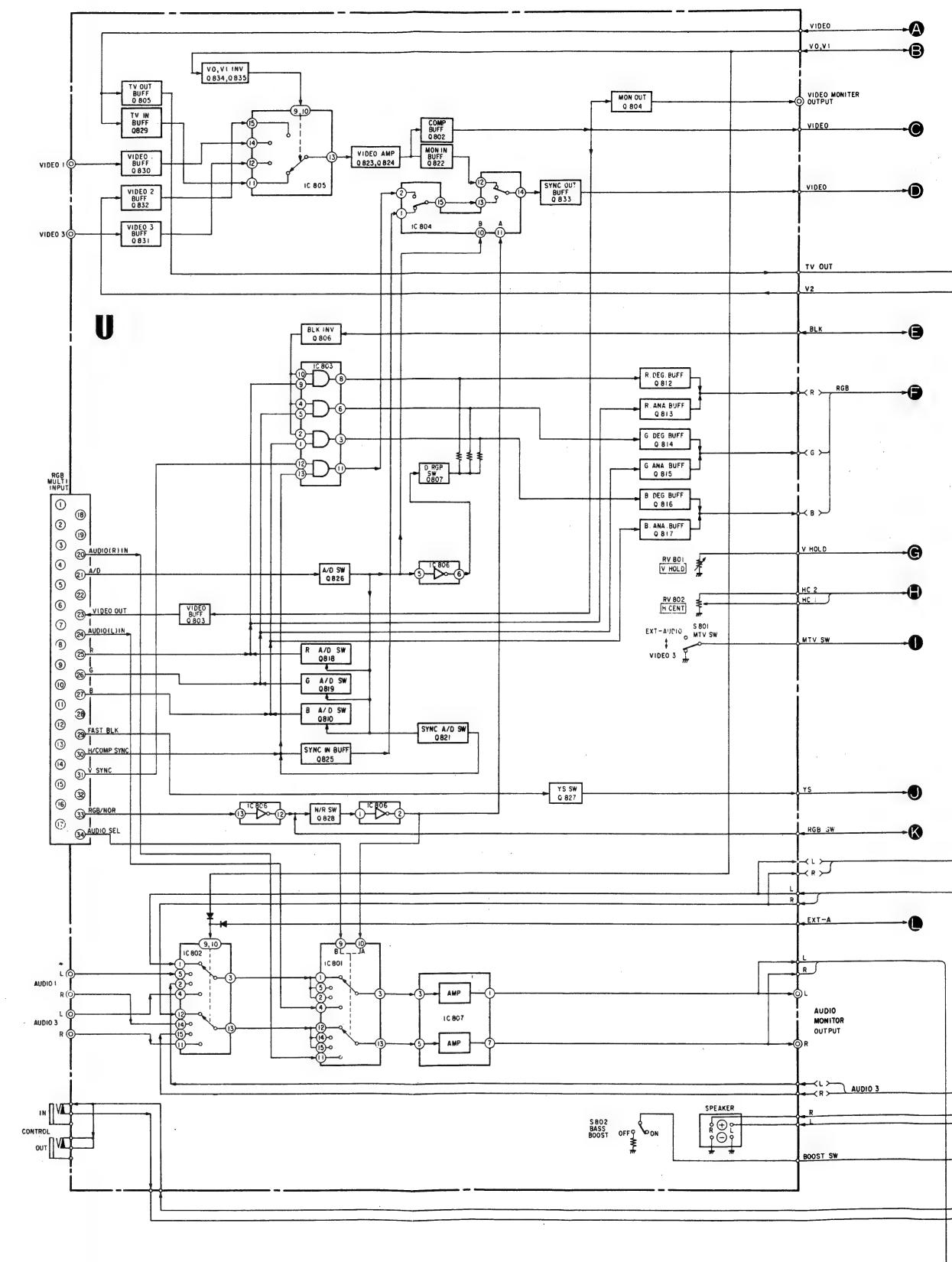


**SECTION 5
DIAGRAMS**

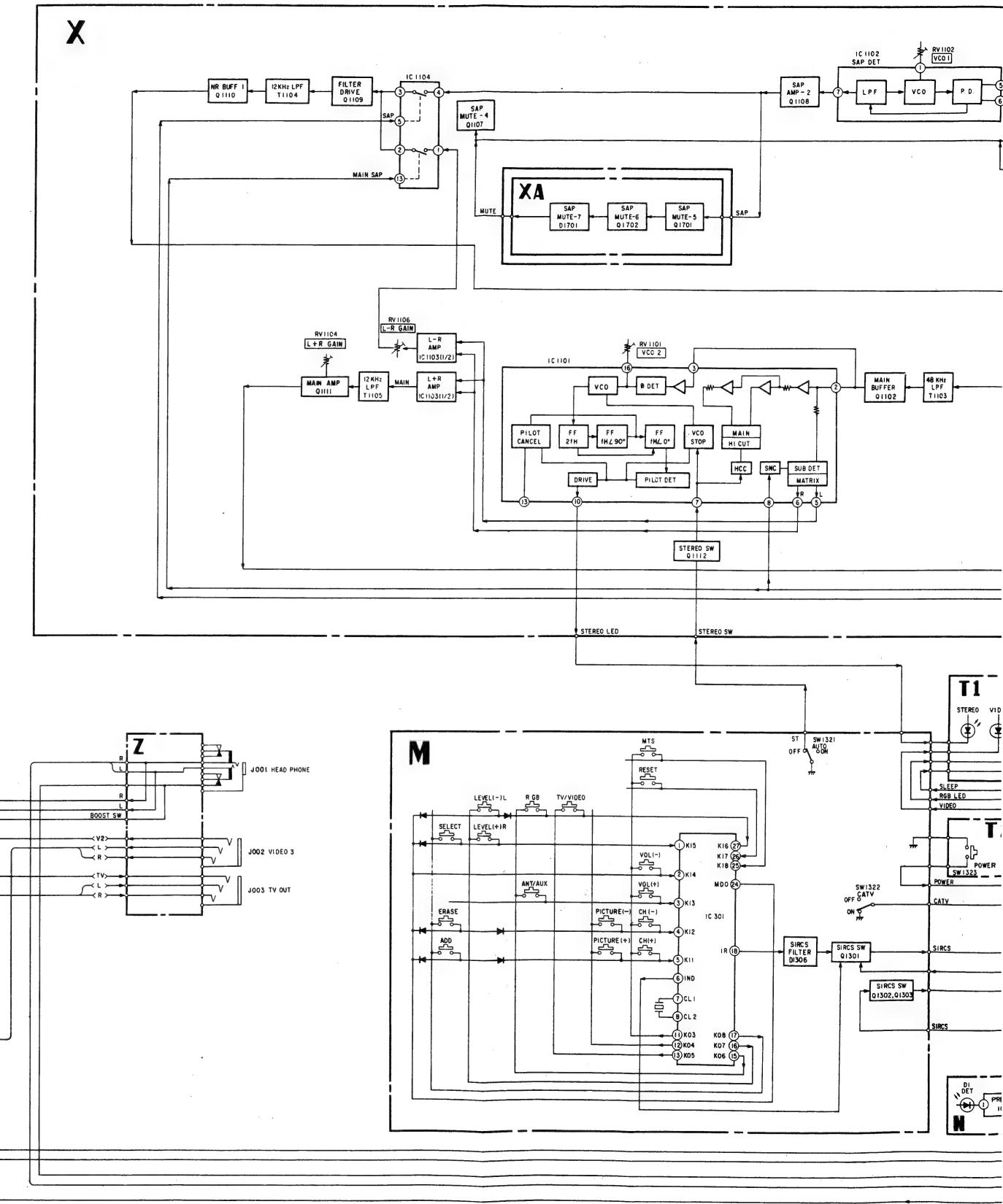
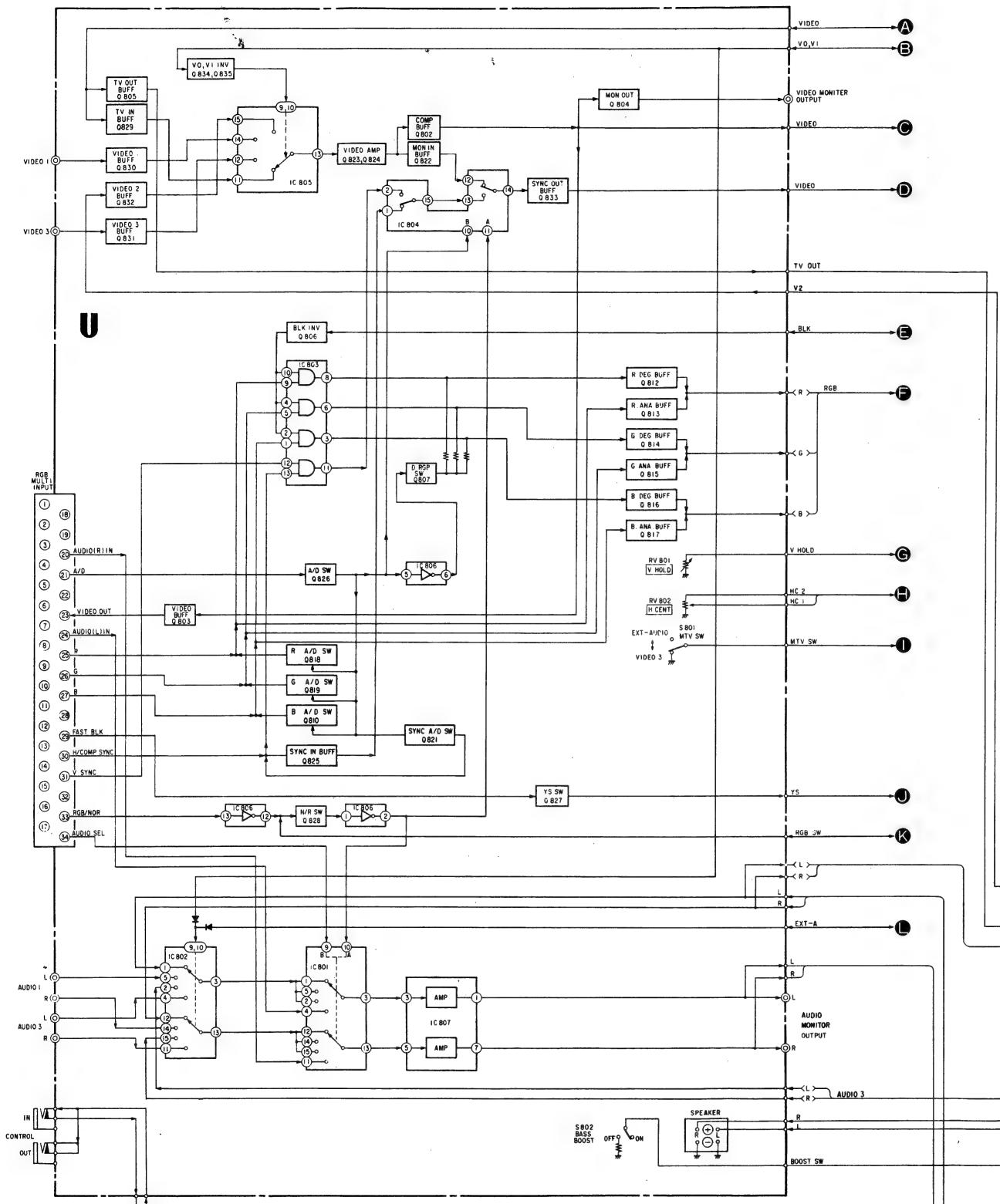
5-1. CIRCUIT BOARDS LOCATION

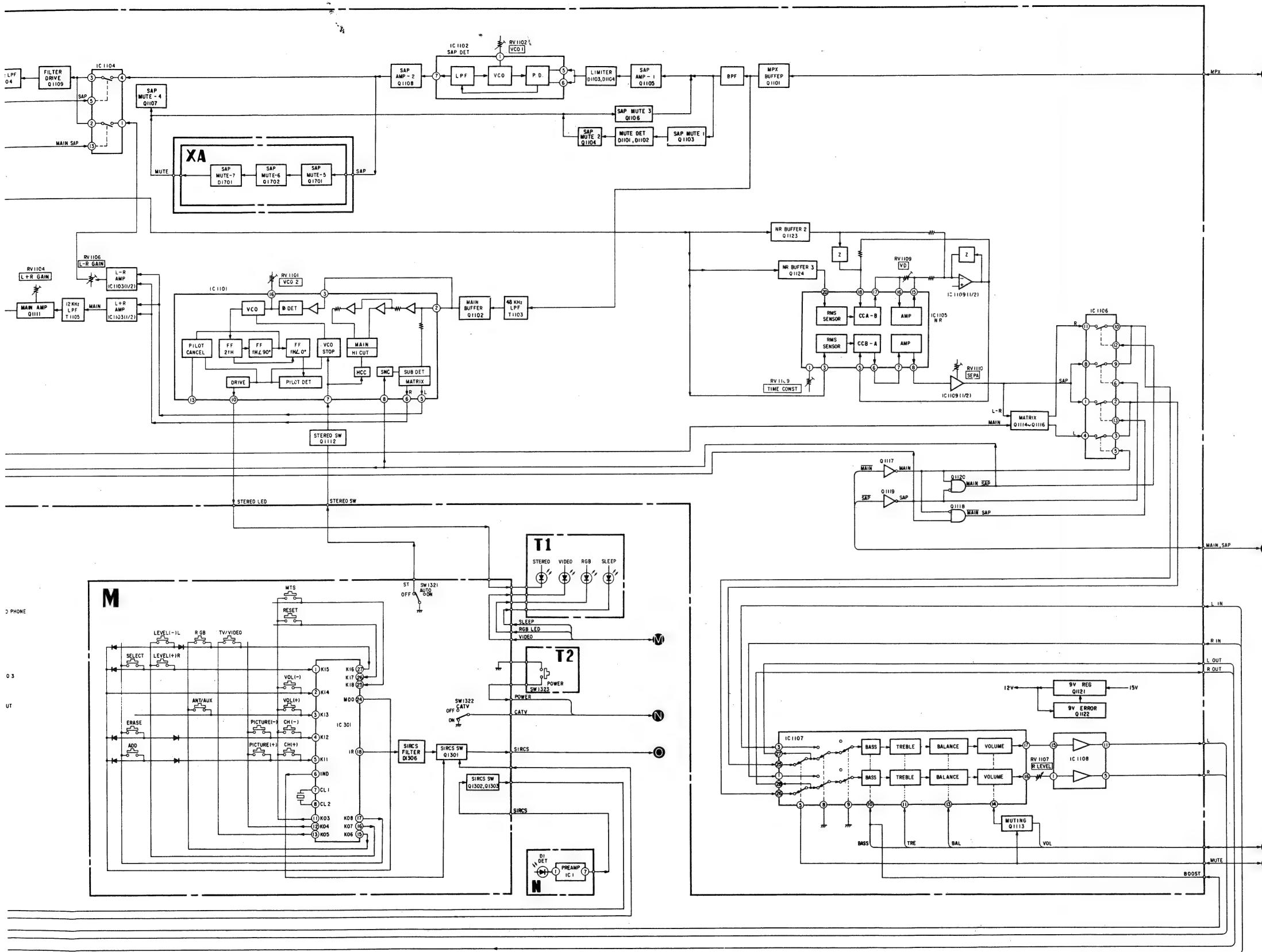


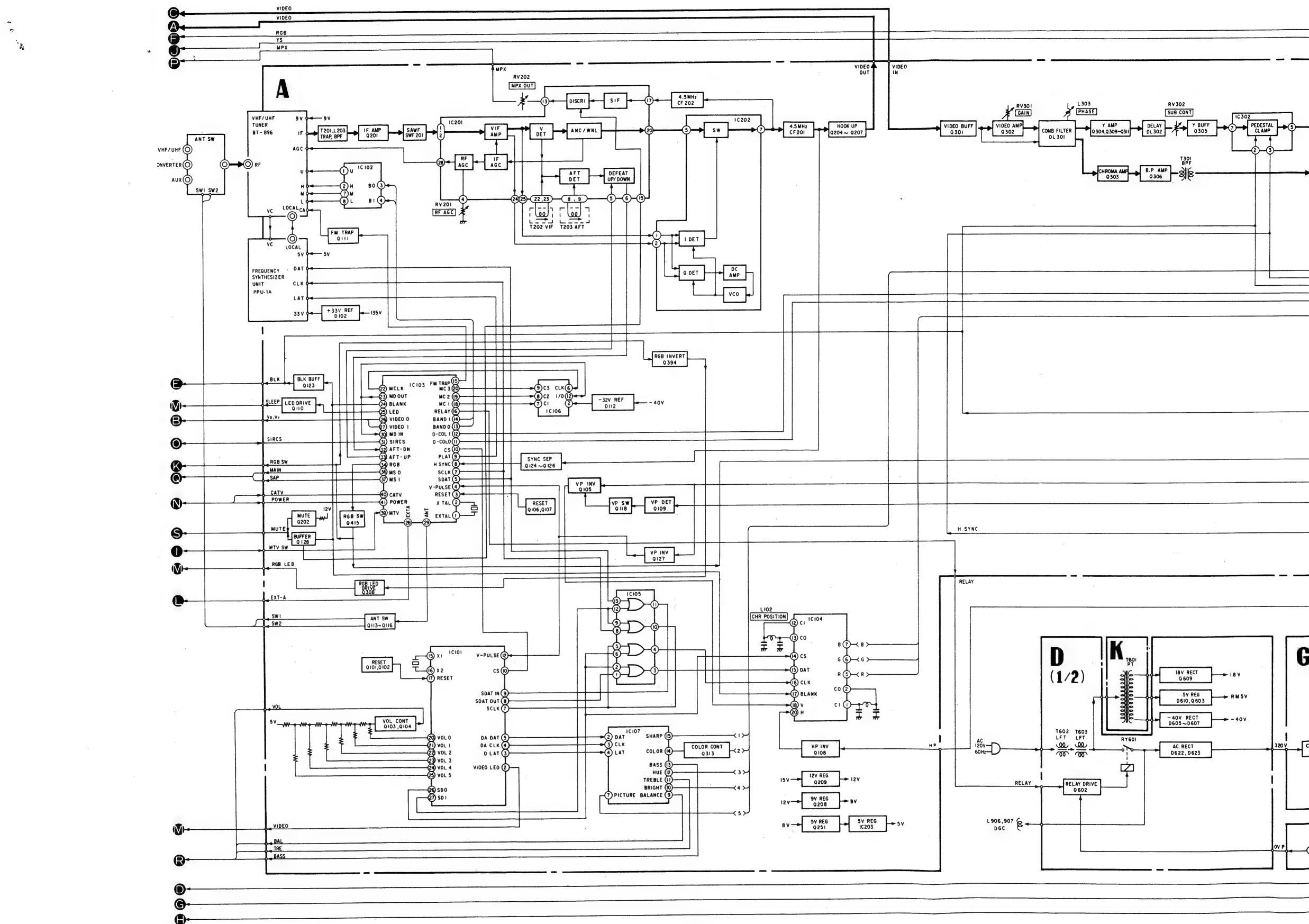
5-2. BLOCK DIAGRAMS

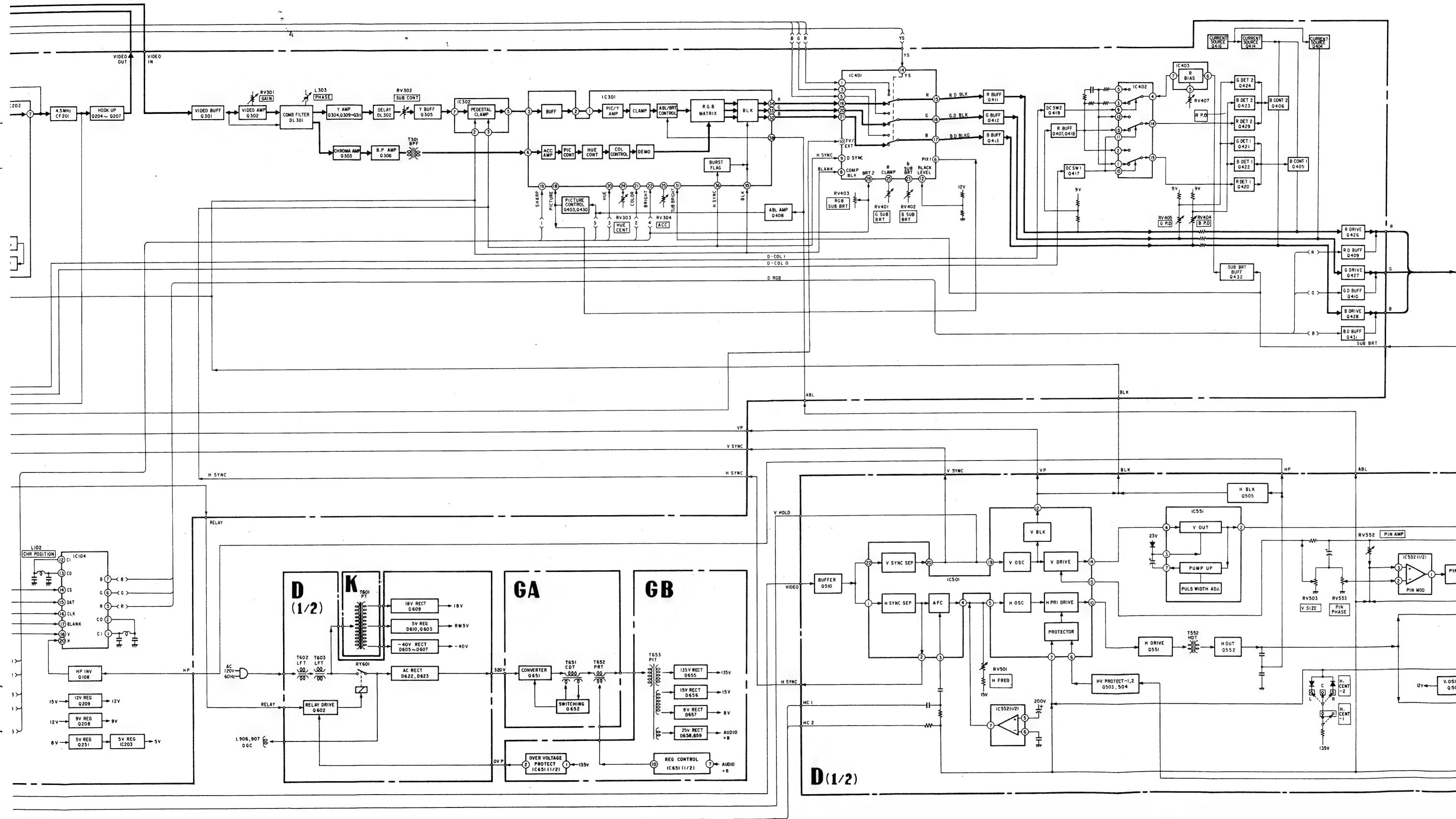


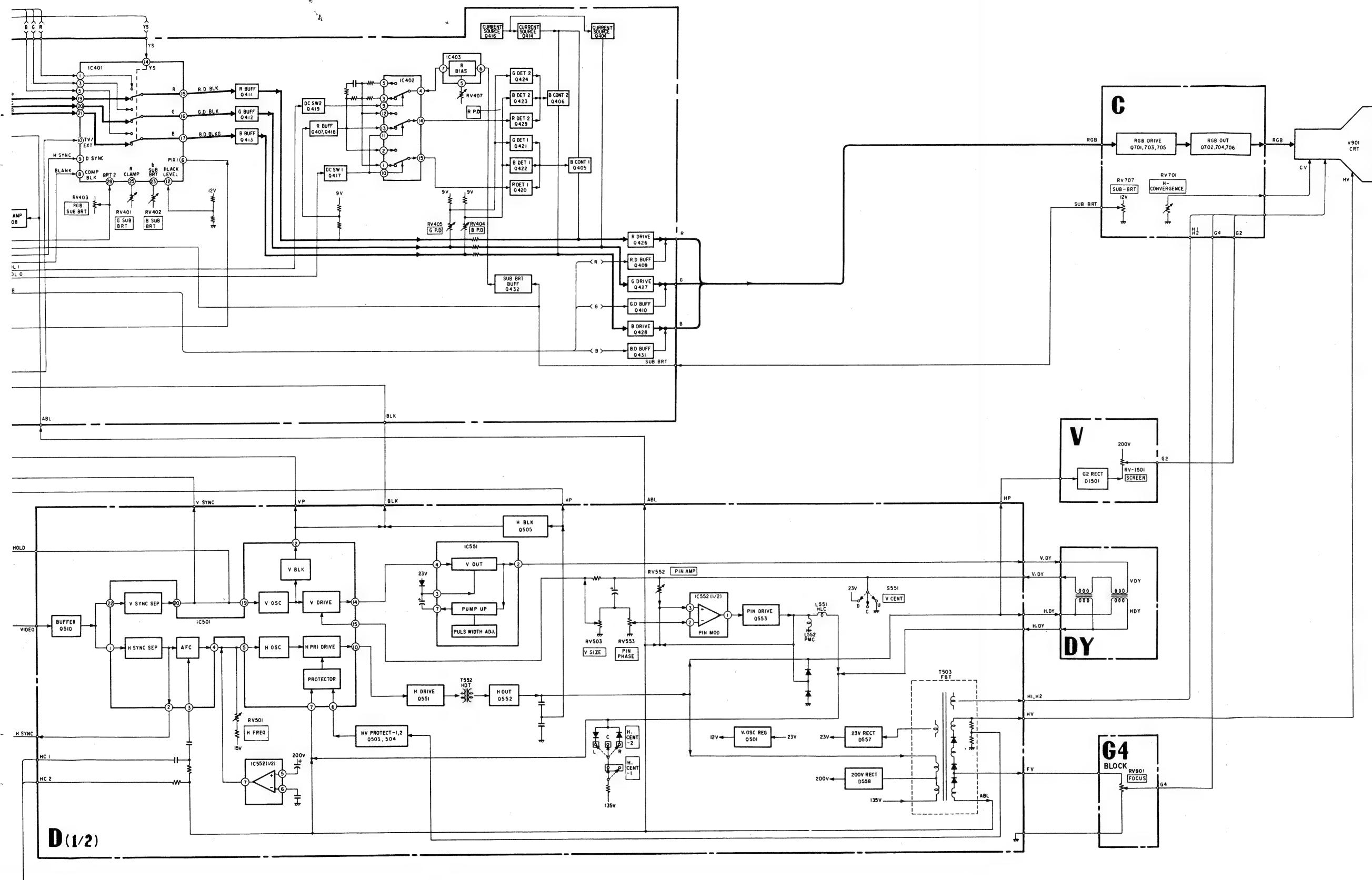
5-2. BLOCK DIAGRAMS











5-3. SCHEMATIC DIAGRAMS

1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16

A

B

6

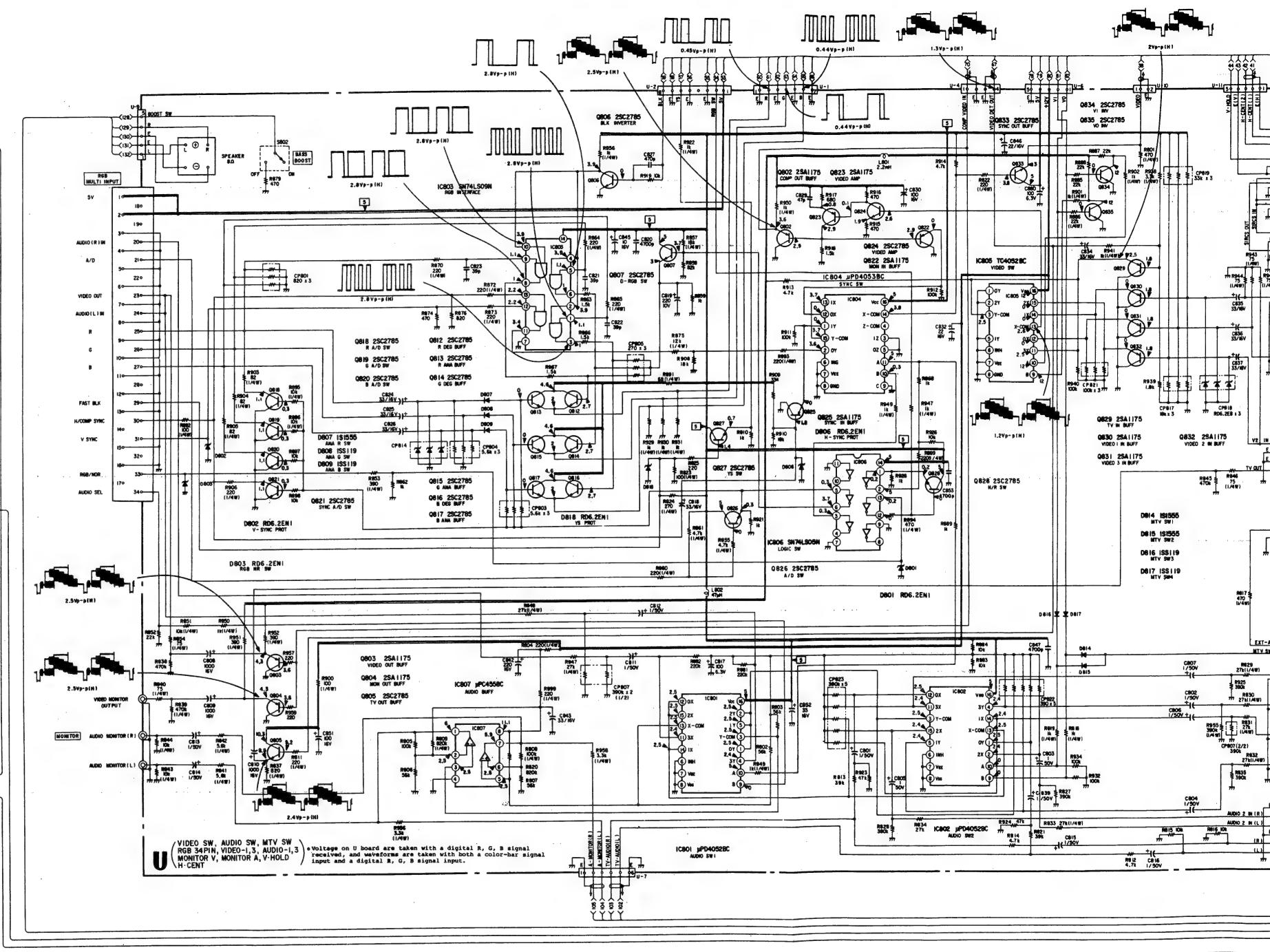
1

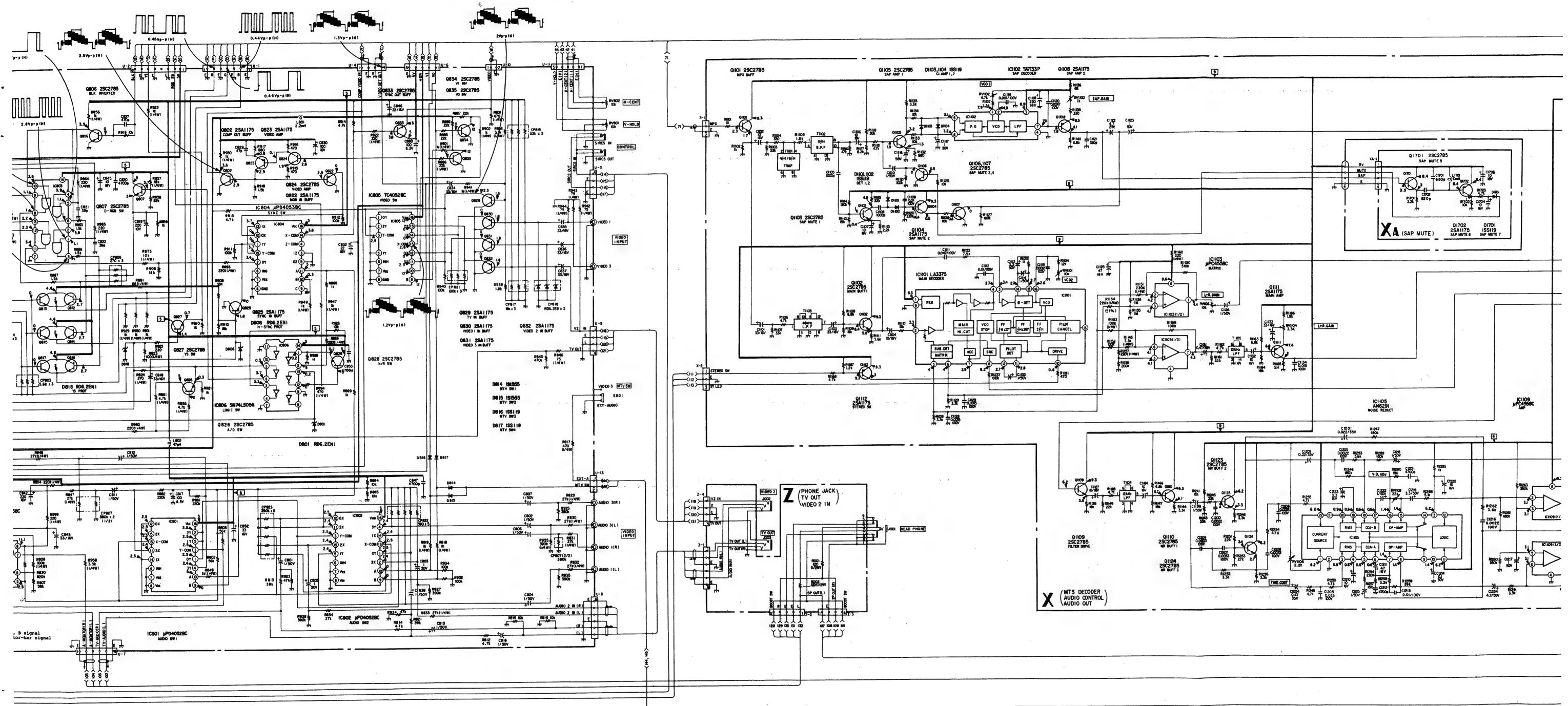
8

8

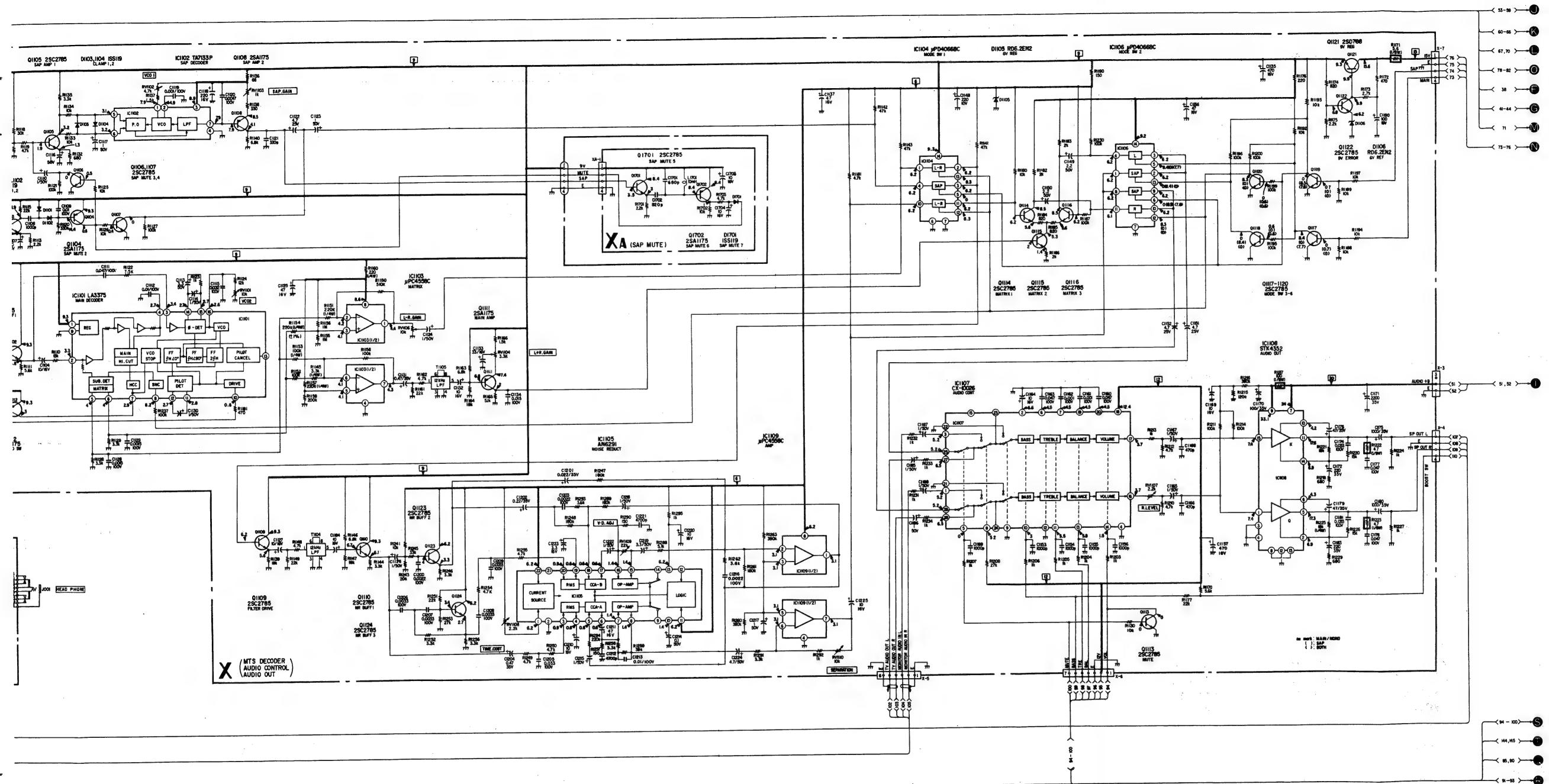
G

4



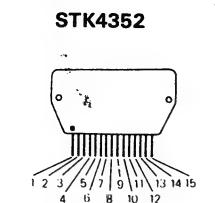
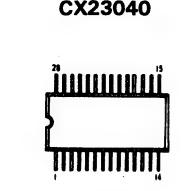
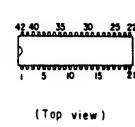


20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34



5-4. SEMICONDUCTORS

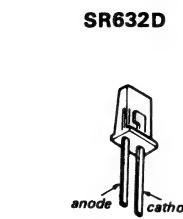
AN6291
CX530-507N
CX-848



2SA733
2SC1363
2SC1364
2SC1740S
2SC1890A



10E2
EQA02-12B5
ERA81-004
GP08D
HZA33-02
RG01-17



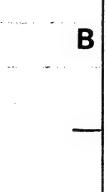
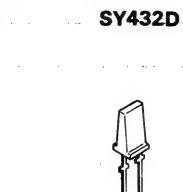
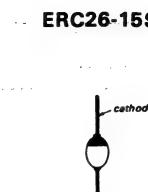
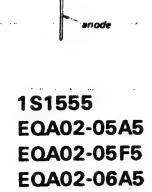
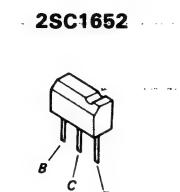
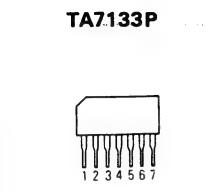
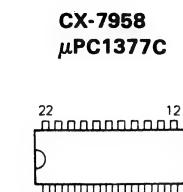
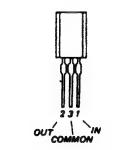
EM-1Z
RM2CS



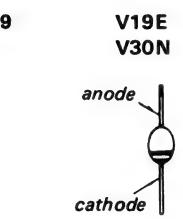
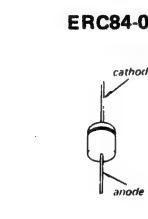
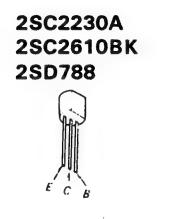
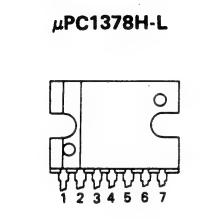
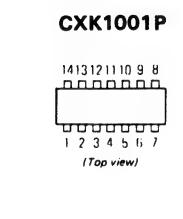
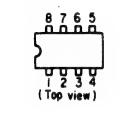
SR632D



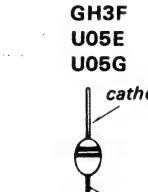
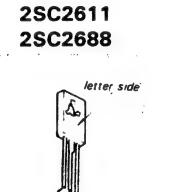
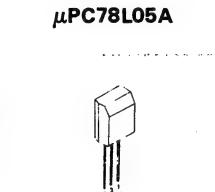
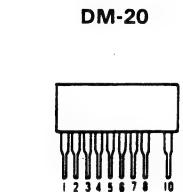
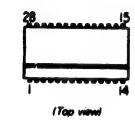
AN78L05
NJM78L05A



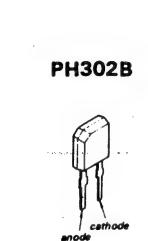
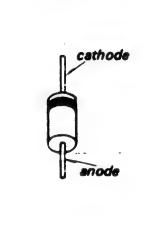
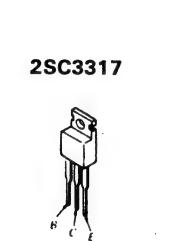
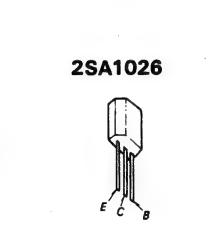
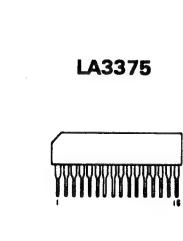
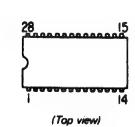
BA4558
TL4558P-B
μPC4558C



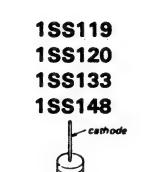
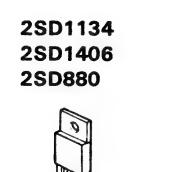
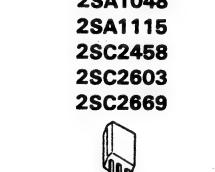
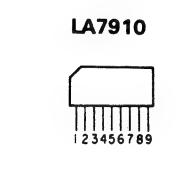
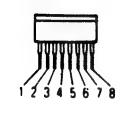
CX10026



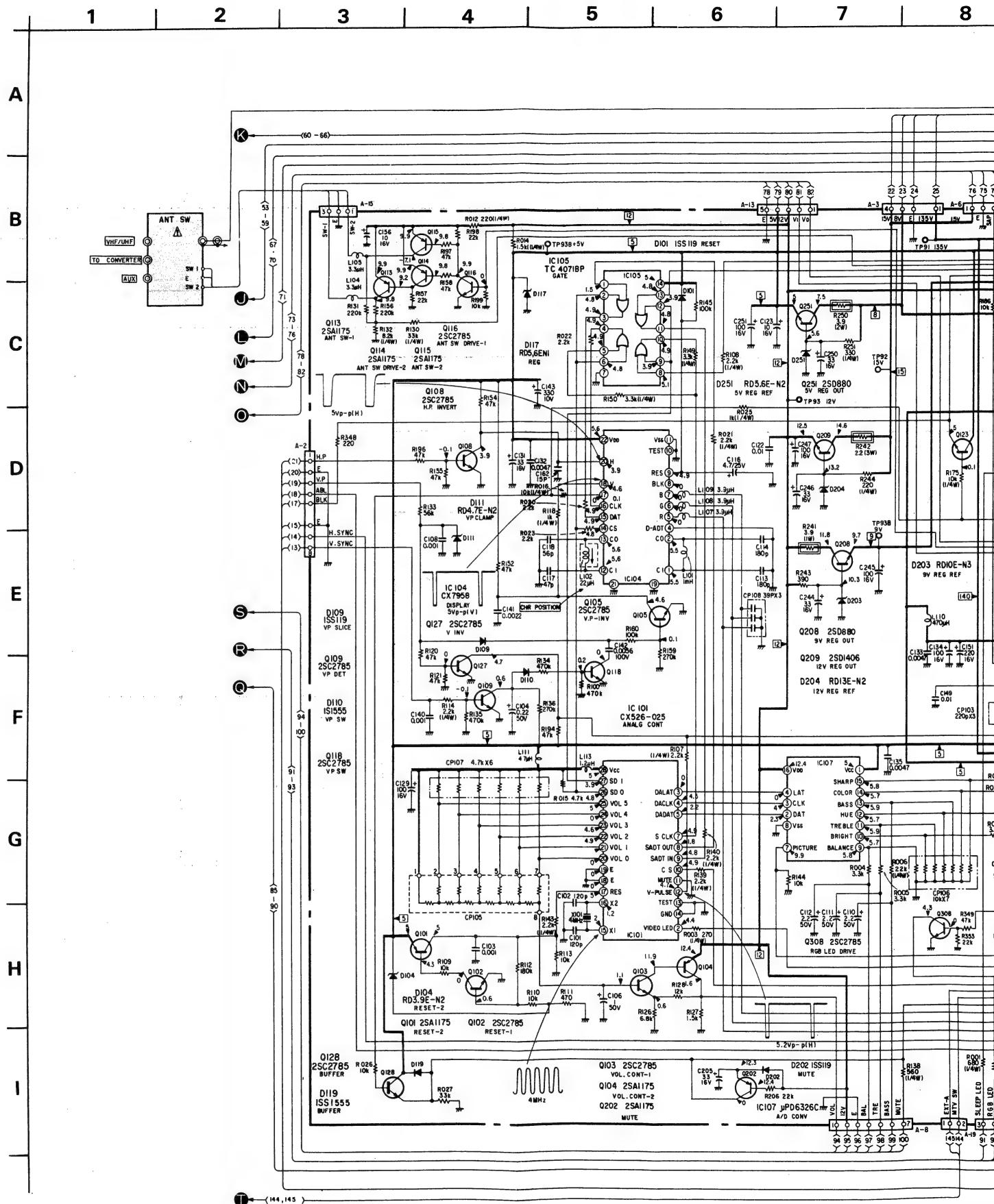
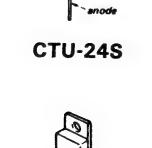
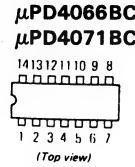
CX20014A
CX20100
CX20125
CX526-025



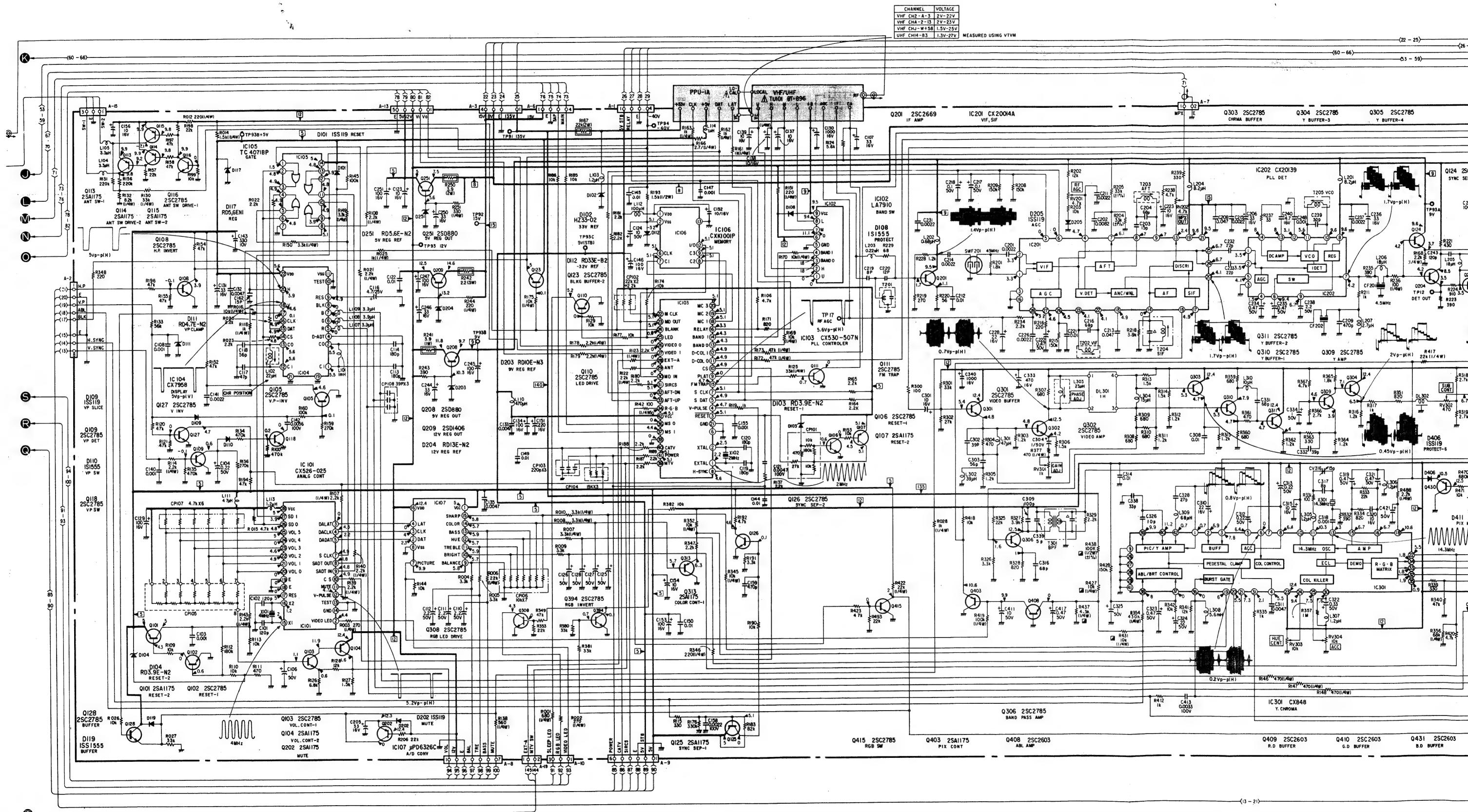
CX20106



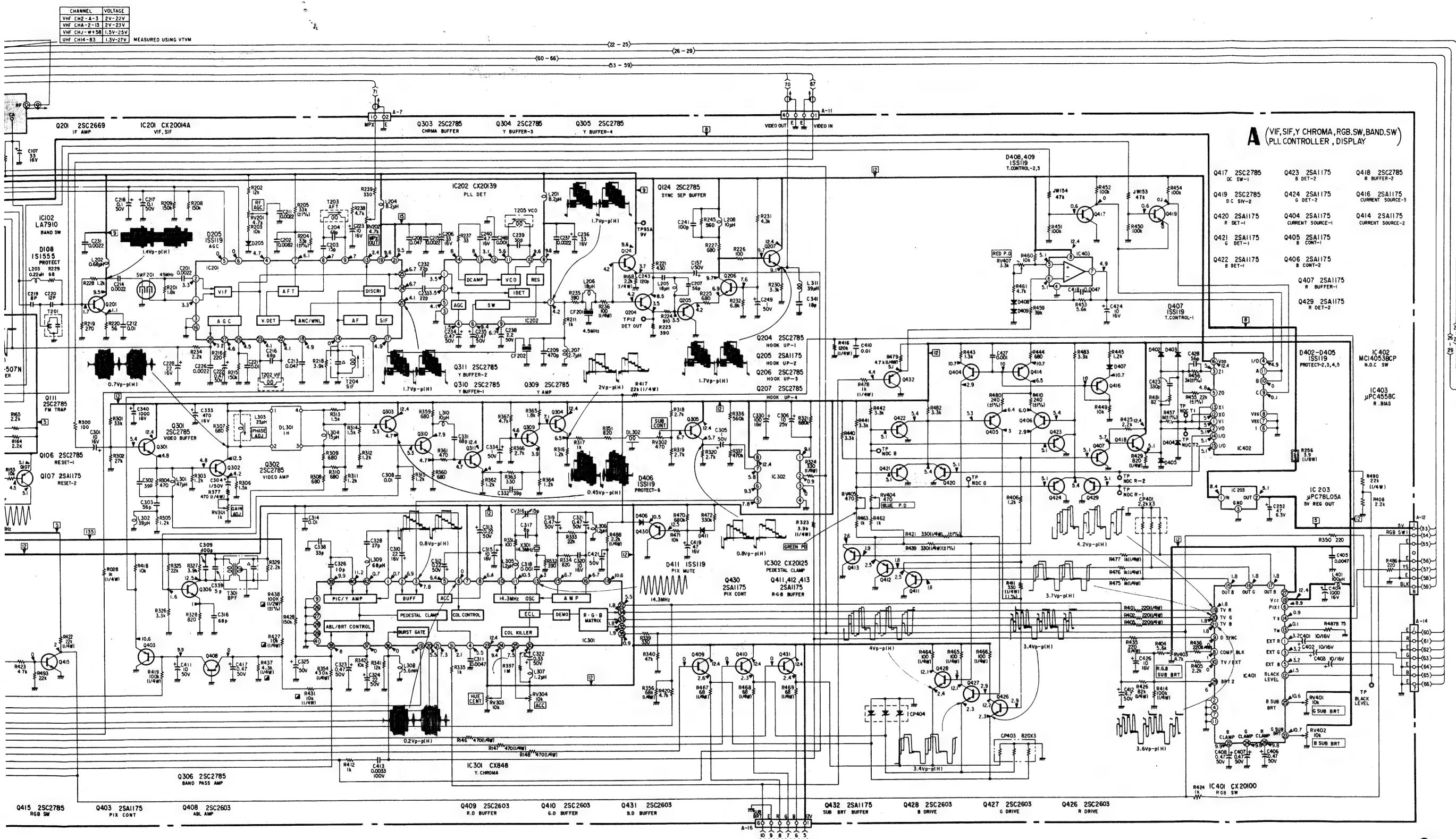
CX20139
HD74LS05P
SN74LS05N
SN74LS09N
TC4066BP
TC4071BP
μPD4066BC
μPD4071BC



2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18

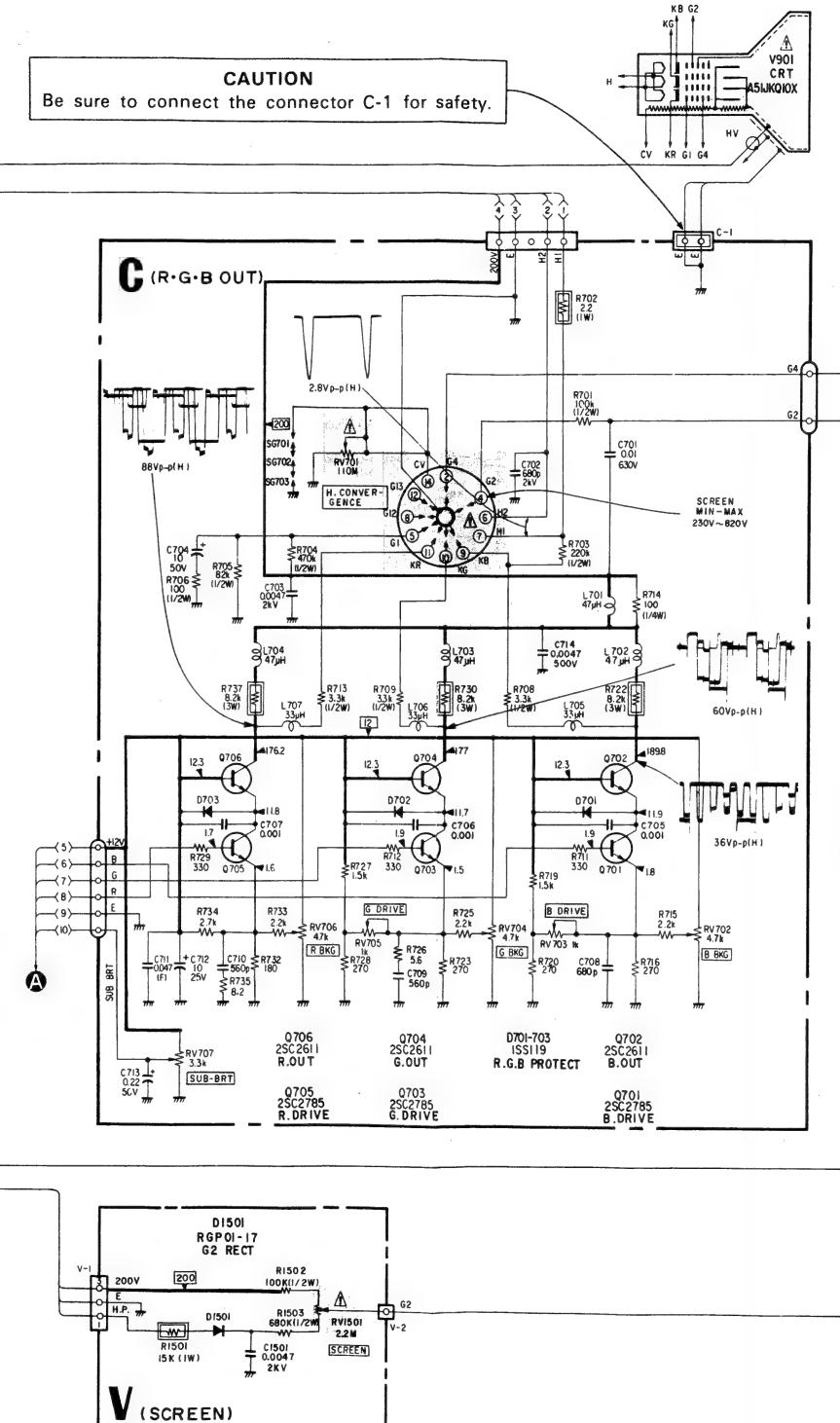
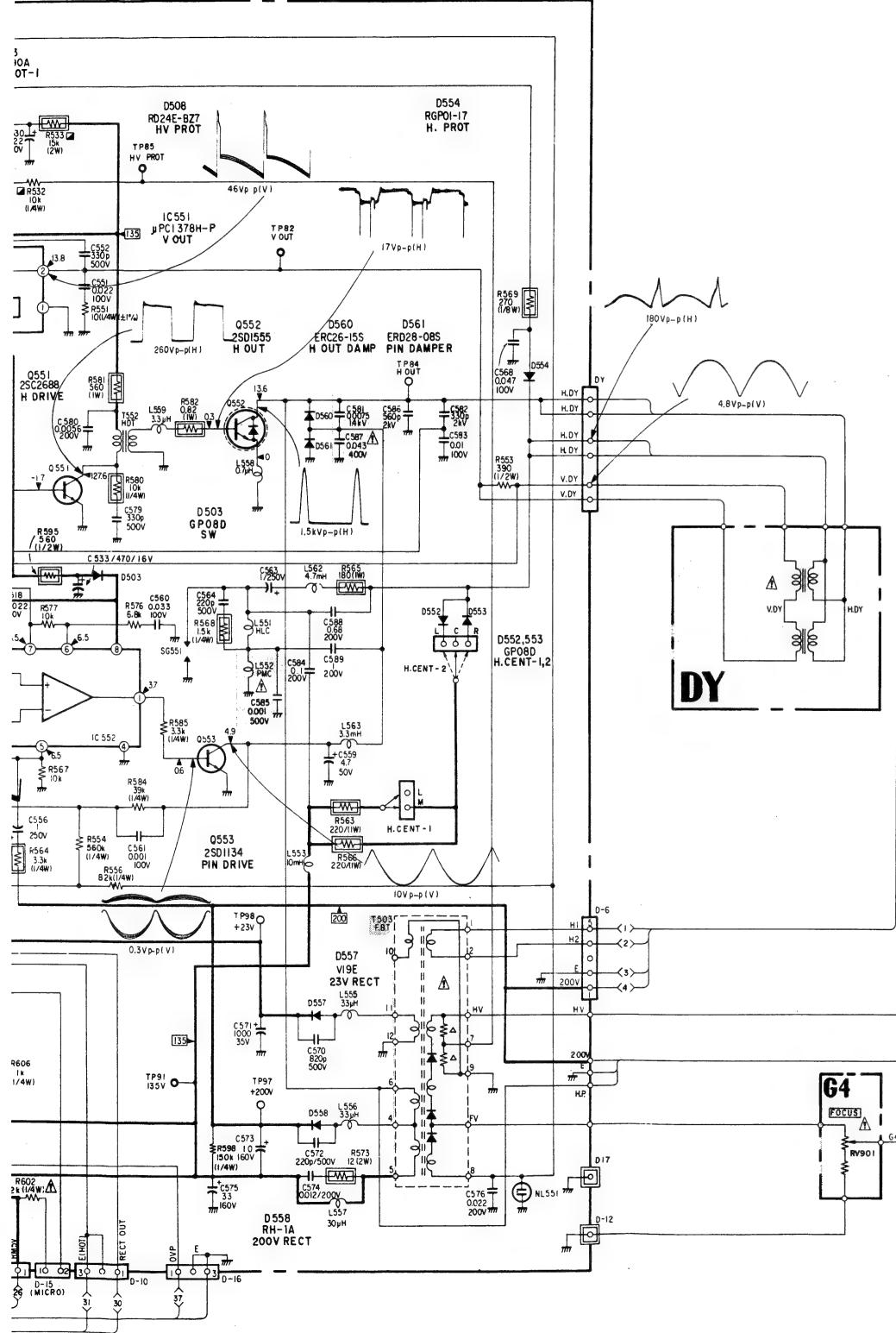


12 13 14 15 16 17 18 19 20 21 22 23 24 25 26



15 16 17 18 19 20 21 22 23 24 25

25



Note: The components identified by shading and mark are critical for safety. Replace only with part number specified.

Note: Les composants identifiés par une trame et par une marque sont d'une importance critique pour la sécurité. Ne les remplacer que par des pièces de numéro spécifié.

- All Capacitors are in μF unless otherwise noted, pF: $\mu\mu\text{F}$ 50WV or less are not indicated except for electrolytics.
- All resistors are in ohms, 1/6W unless otherwise noted.
 $\text{k}\Omega = 1000\Omega$, $\text{M}\Omega = 1000\text{k}\Omega$
- Standard for the M Board is 1/4W.
- : nonflammable resistor.
- : internal component.
- : panel designation.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- The components identified by in this manual have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used.
- When replacing components identified by mark the necessary adjustments indicated. If results do not meet the specified value, change the component identified by and repeat the adjustment until the specified value is achieved.
(Refer to R531 adjustment on page 25.)
- When replacing the part in below table, be sure to perform the related adjustment.

Part replaced ()	Adjustment ()
D507, D508, D510, IC501 Q503, Q504, R512, R519 R529, R530, R531, R532 R533, R534, R542, R544 (D Board) R427, R431, R437, R438 (A Board)	HOLD DOWN R531 (D Board)

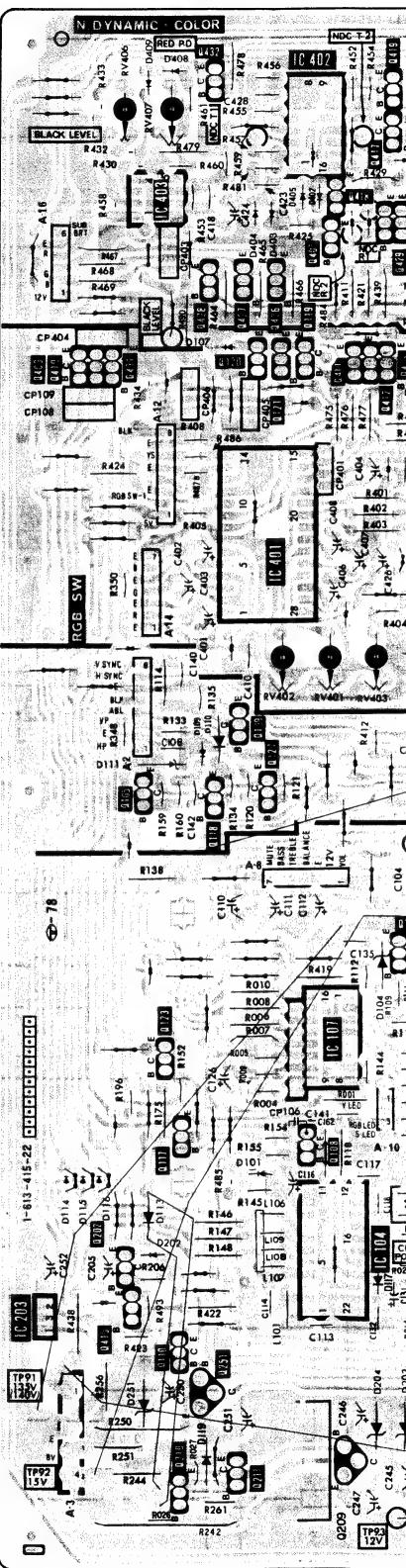
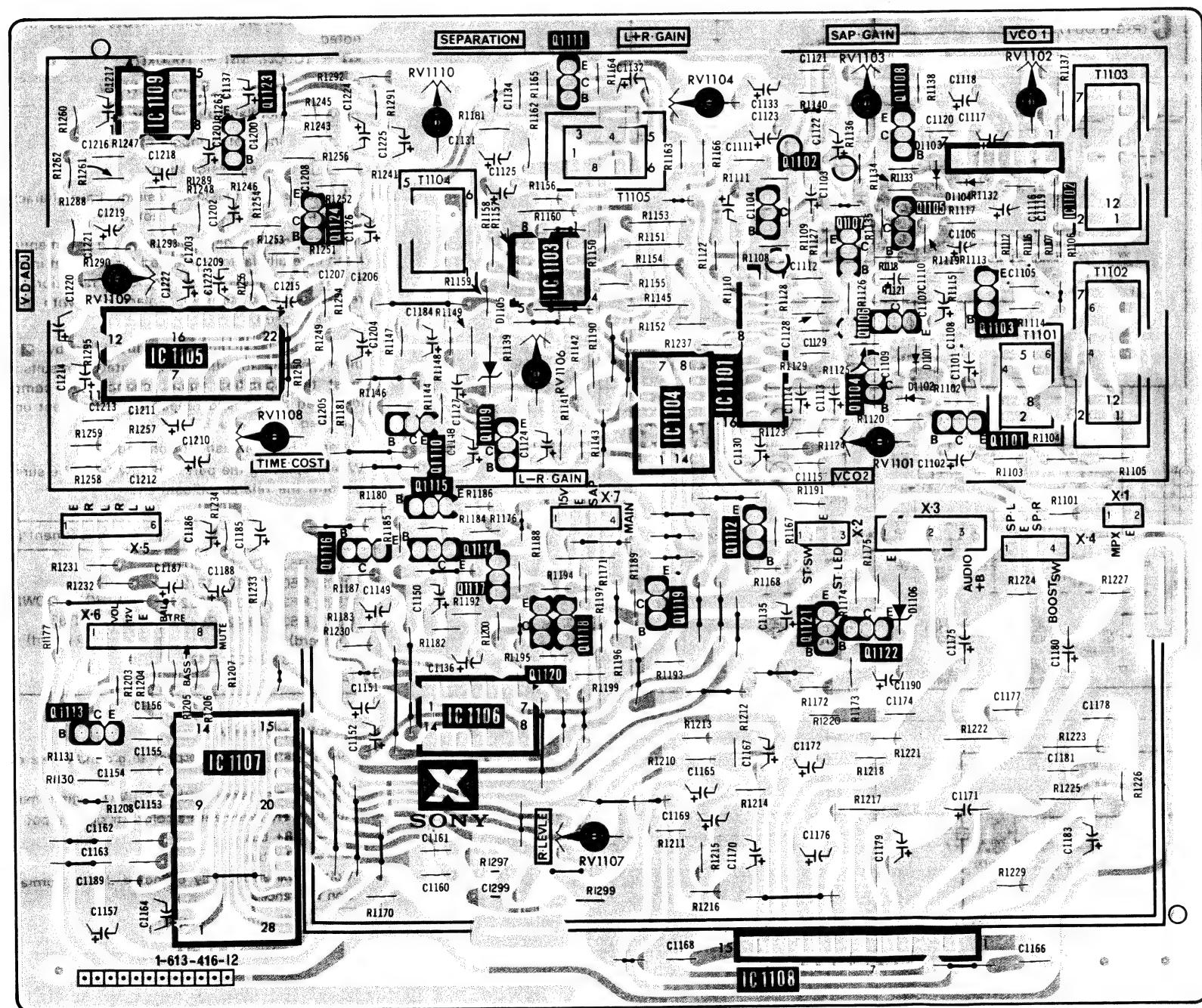
- All voltages are in V.
- Voltages are dc with respect to ground unless otherwise noted.
- Readings are taken with a $10\text{M}\Omega$ digital multimeter.
- Readings are taken with a color-bar signal input.
- : B+ bus.
- : B- bus.
- Voltage variations may be noted due to normal production tolerances.
- : adjustment for repair.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

— X Board —

Q	IC1109 IC1105 1113	4123 1124 IC1107	1124 1116 IC1106	1110 1115 1114 1117 1109 1120 1118	1111 IC1103 1119	IC1104 1119	1102 IC1101 1112	1107 1104 1106 1121 1122	1108 1105 1103 1101	IC1102
D				1105				1102 1106	1103 1101	1104
ADJ	RV1109	RV1108		RV1110	RV1106 RV1107	RV1104	RV1103 RV1101		RV1102	

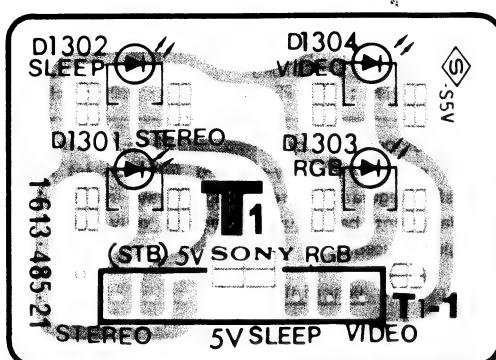
— A Board —



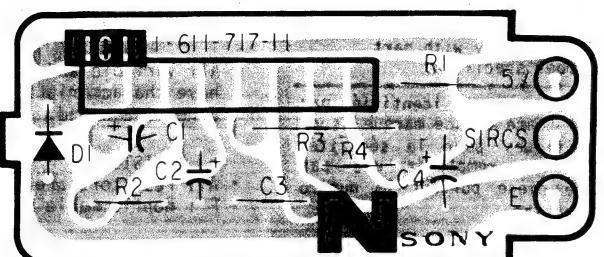
T1 [LED DISPLAY] **T2** [POWER CONTROL] **K** [STAND BY TRANSFORMER]

1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16

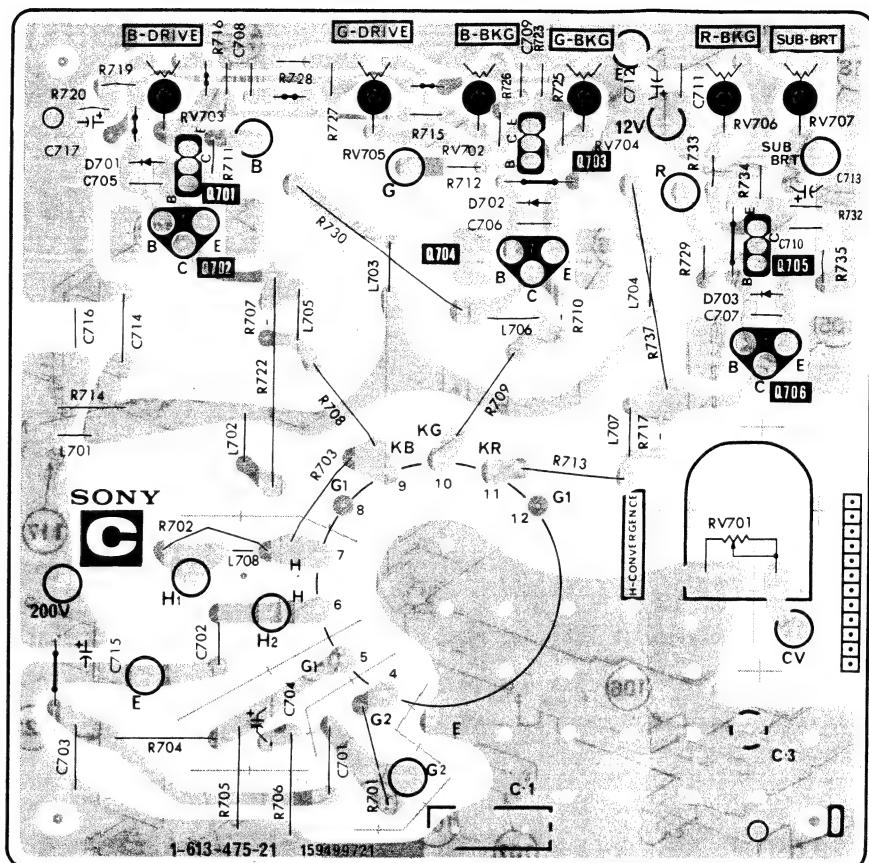
— T1 Board —



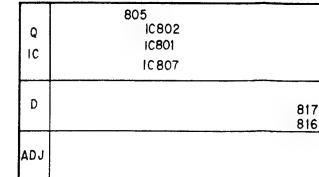
— N Board —



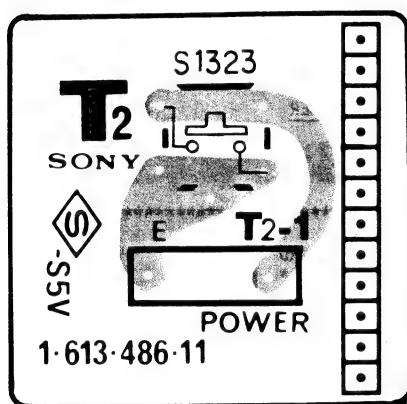
— C Board —



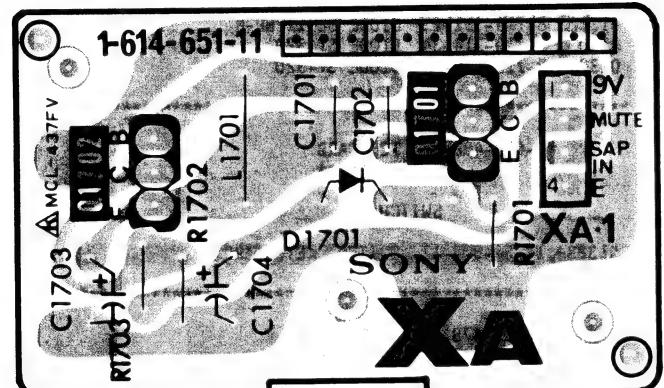
— U Board —



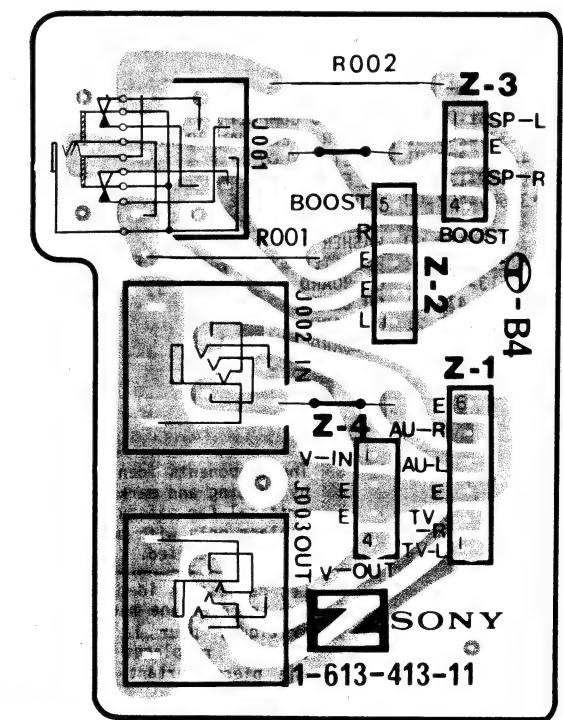
— T2 Board —



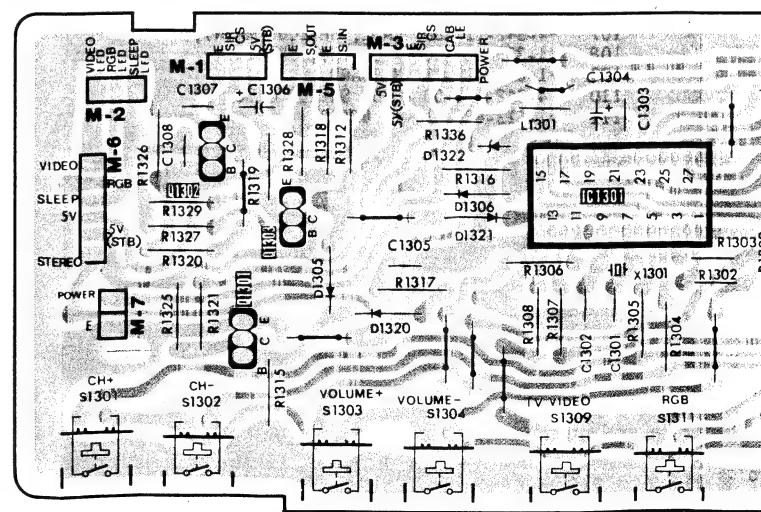
— XA Board —



— Z Board —



— M Board —

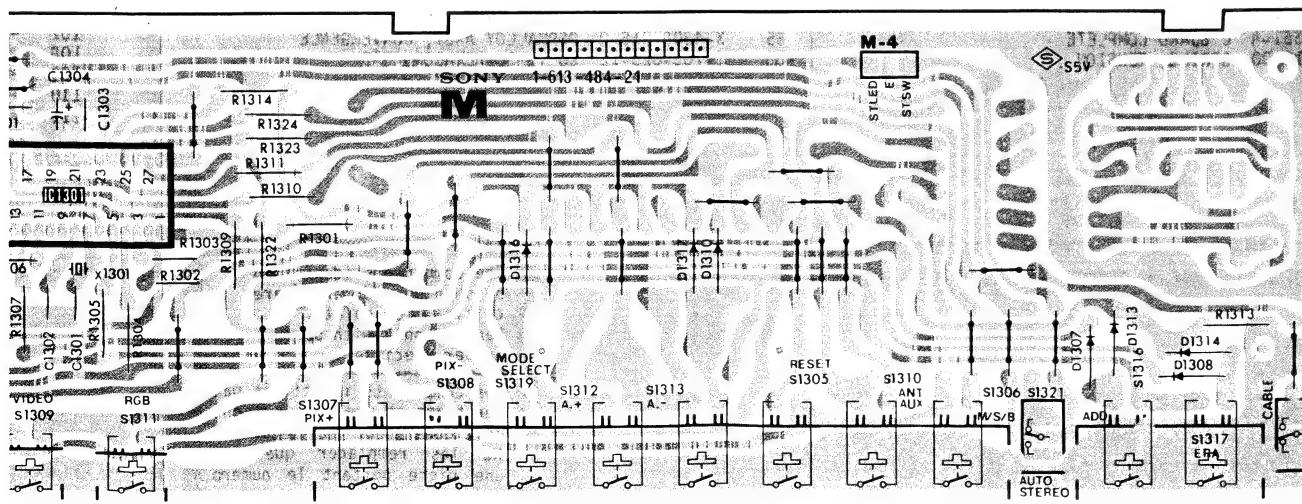
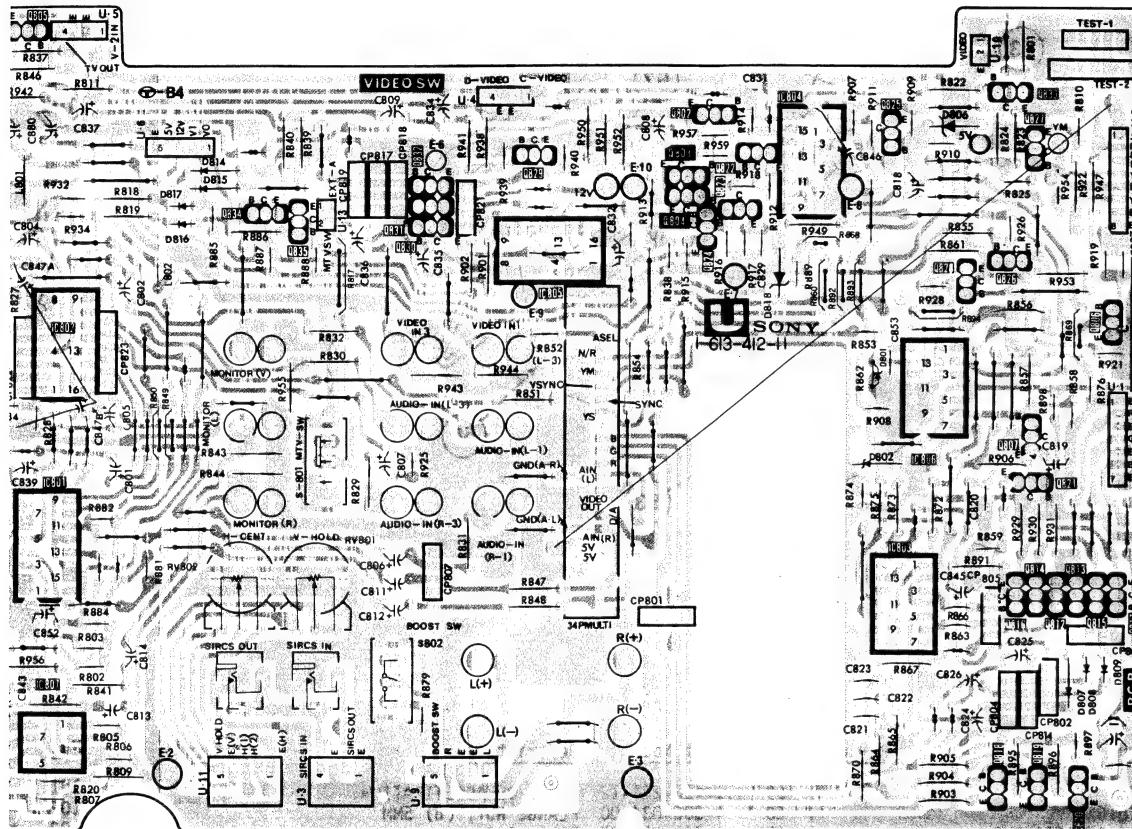
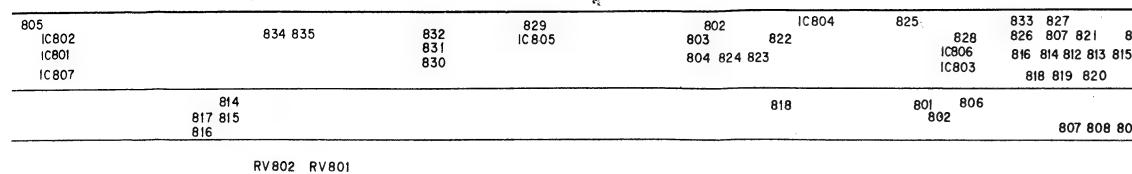


DUTY **Z** PHONES JACK, TV OUT JACK,
VIDEO 2 IN JACK

U VIDEO SW, AUDIO SW, H CENT, V HOLD, MTV SW,
RGB 34PIN TERMINAL, VIDEO 1, 3 TERMINAL,
AUDIO 1,3 TERMINAL, MONITOR V TERMINAL,
MONITOR A TERMINAL

5 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30

oard —



KV-20XBR II
RM-724/APM-X4

RV-20XBR II
RM-724/APM-X4

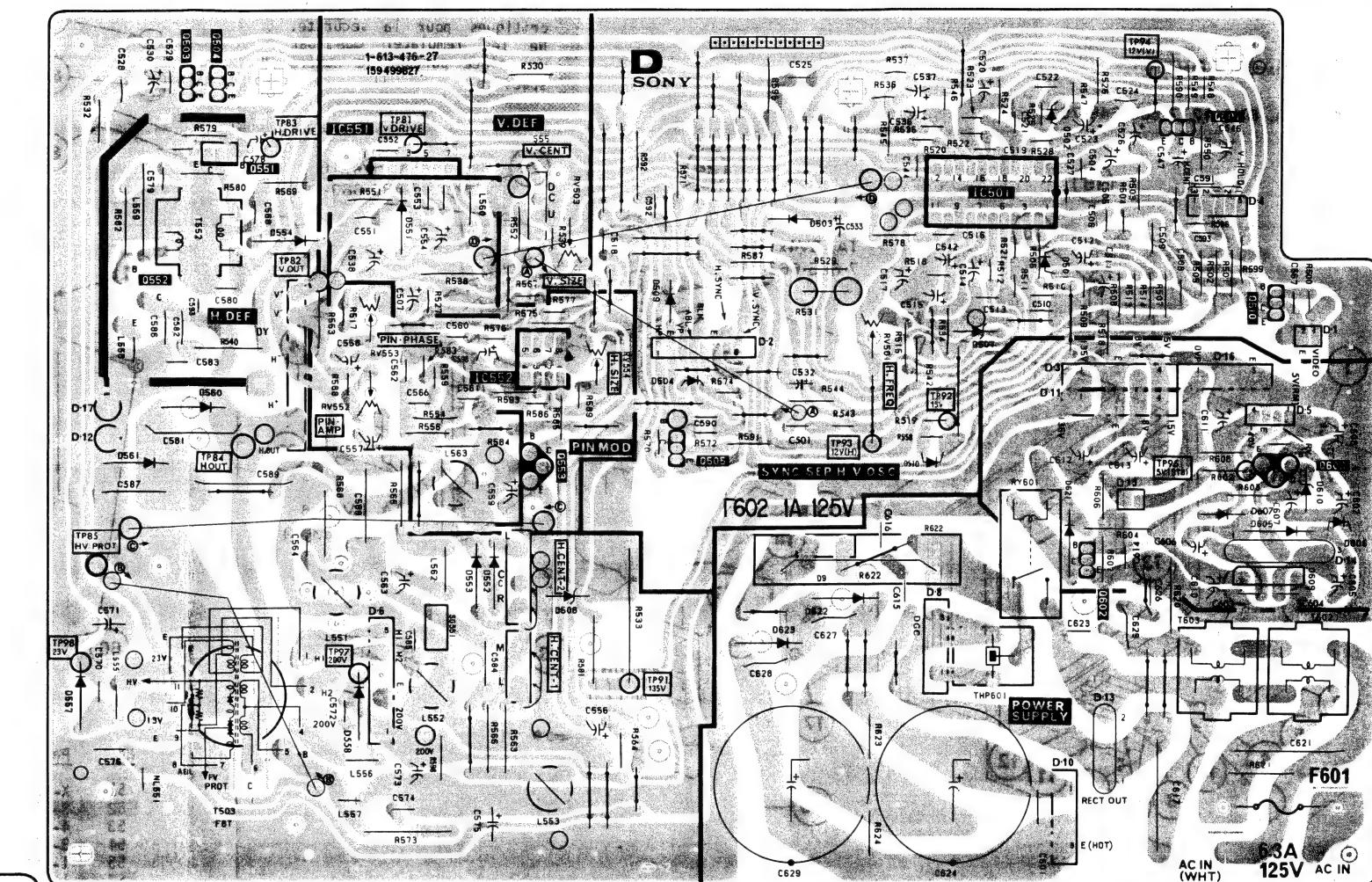
II

11

[CUSTOMER CONTROL]

D [POWER SUPPLY, H DEF, V DEF,
PIN CORRECTION, H.V OSC]

= D Board =



SECTION 6

EXPLODED VIEWS

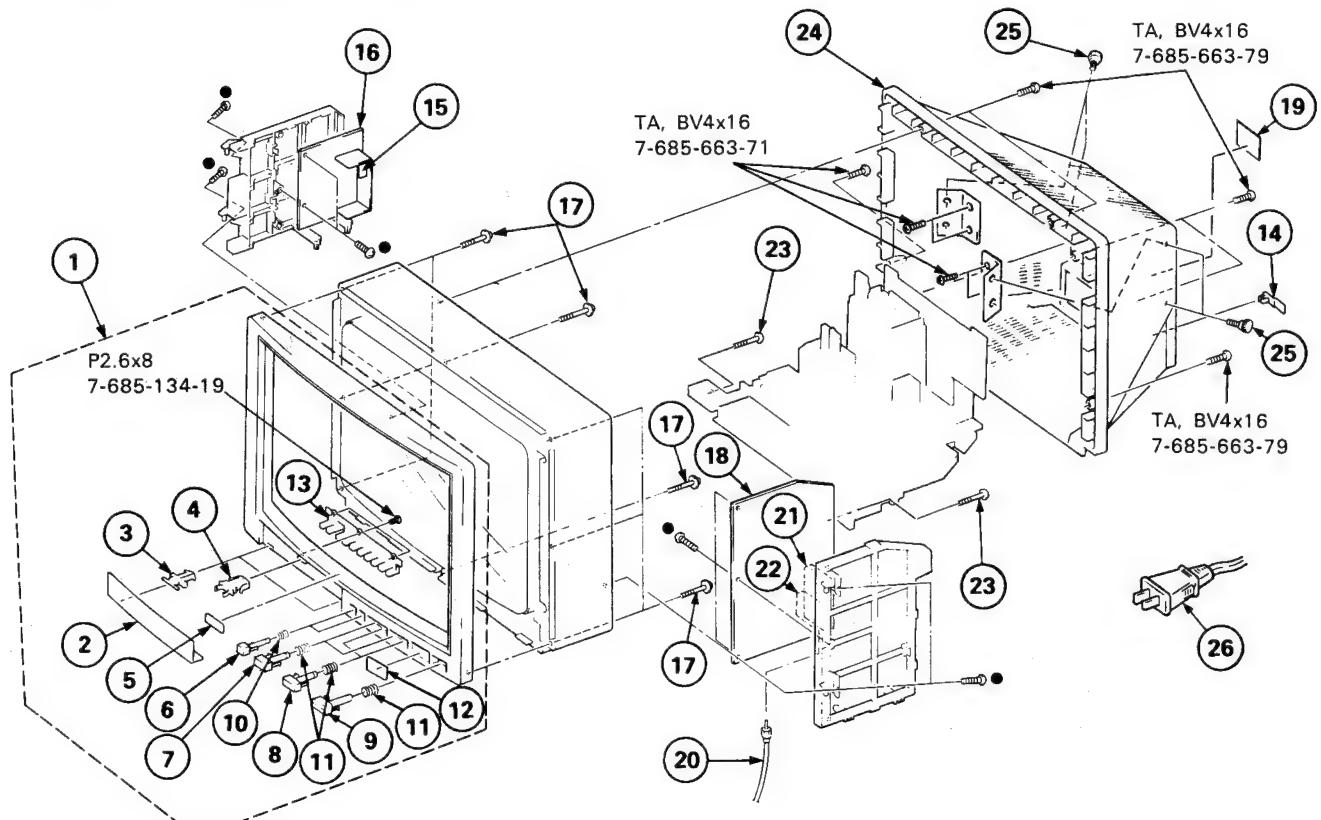
NOTE:

- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remark column.

- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

6-1. BACK COVER

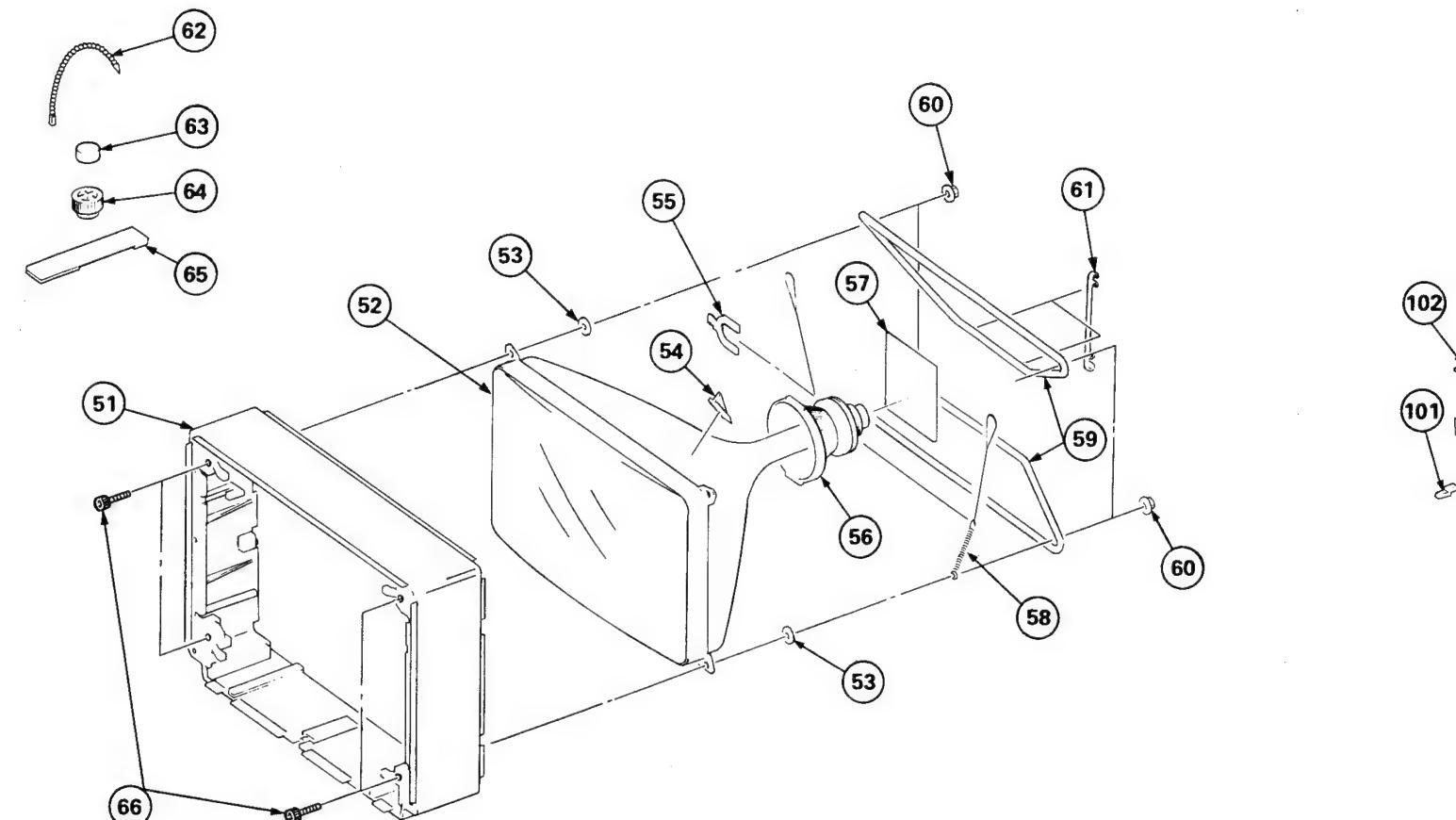
● : TA, BV3x12 7-685-648-79



The components identified by shading and mark  are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

6-2. CRT



No.	Part No.	Description	Remark	No.	Part No.	Description	Remark
51	X-4374-211-5	CABINET ASSY	66	59	A1-426-224-12	COIL, DEMAGNETIZATION	
52	A8-736-952-05	CRT (A51JKQ10X)		60	4-306-034-00	FLANGE NUT, (B) 5MM	
53	4-373-615-02	WASHER, CRT POSITIONING		61	*4-369-319-00	BAND, COIL	
54	3-703-003-00	SPACER, DY		62	4-308-870-00	CLIP, LEAD WIRE	
55	1-452-277-00	MAGNET, BMC		63	1-452-032-00	MAGNET, DISK; 10MM Ø	
56	A1-451-256-12	DEFLECTION YOKE (SY-153)		64	1-452-094-00	MAGNET, ROTATABLE DISK; 15MM Ø	
57	*A-1330-561-A	C BOARD COMPLETE		65	X-4308-815-0	PERMALLOY ASSY, CONVERGENCE	
58	4-369-318-00	SPRING, TENSION		66	3-703-025-12	BOLT M5, HEXAGON-HEAD	

No.

101
102
103
104
105
106
107
108
109
110
111

No.	Part No.	Description	Remark	No.	Part No.	Description	Remark
1	X-4374-212-6	BEZEL ASSY		14	4-329-127-00	CLAMP, CORD	
2	X-4374-215-5	DOOR ASSY, CONTROL		15	*1-614-651-11	XA BOARD	
3	3-662-365-00	SHAFT (S), DOOR		16	*A-1386-016-A	X BOARD COMPLETE	
4	4-352-034-00	CATCHER, PUSH		17	4-319-520-00	SCREW, SPECIAL (+PW4X30)	
5	4-374-115-01	EMBLEM, SONY		18	*A-1296-272-A	A BOARD COMPLETE	
6	X-4374-201-2	BUTTON (A) ASSY		19	*4-383-717-01	LABEL, MODEL NUMBER	
7	X-4374-202-2	BUTTON (B) ASSY		20	*1-557-009-00	CABLE, P-P	
8	X-4374-203-2	BUTTON (C) ASSY		21	▲1-463-470-00	TUNER, ET (BT-896)	
9	X-4374-210-1	BUTTON ASSY, POWER		22	▲1-463-471-33	SYNTHESIZER UNIT, FREQUENCY	
10	3-571-847-00	SPRING, COMPRESSION		23	3-703-083-00	+ BV 3X25	
11	3-561-888-02	SPRING, COMPRESSION		24	X-4374-279-1	COVER ASSY, BACK	14,25
12	*4-374-135-21	PLATE, TRANSPARENT		25	X-4374-104-1	SCREW (B) ASSY, ORNAMENTAL	
13	4-374-151-01	BUTTON, MULTI		26	▲1-557-269-11	CORD, POWER	

14 25

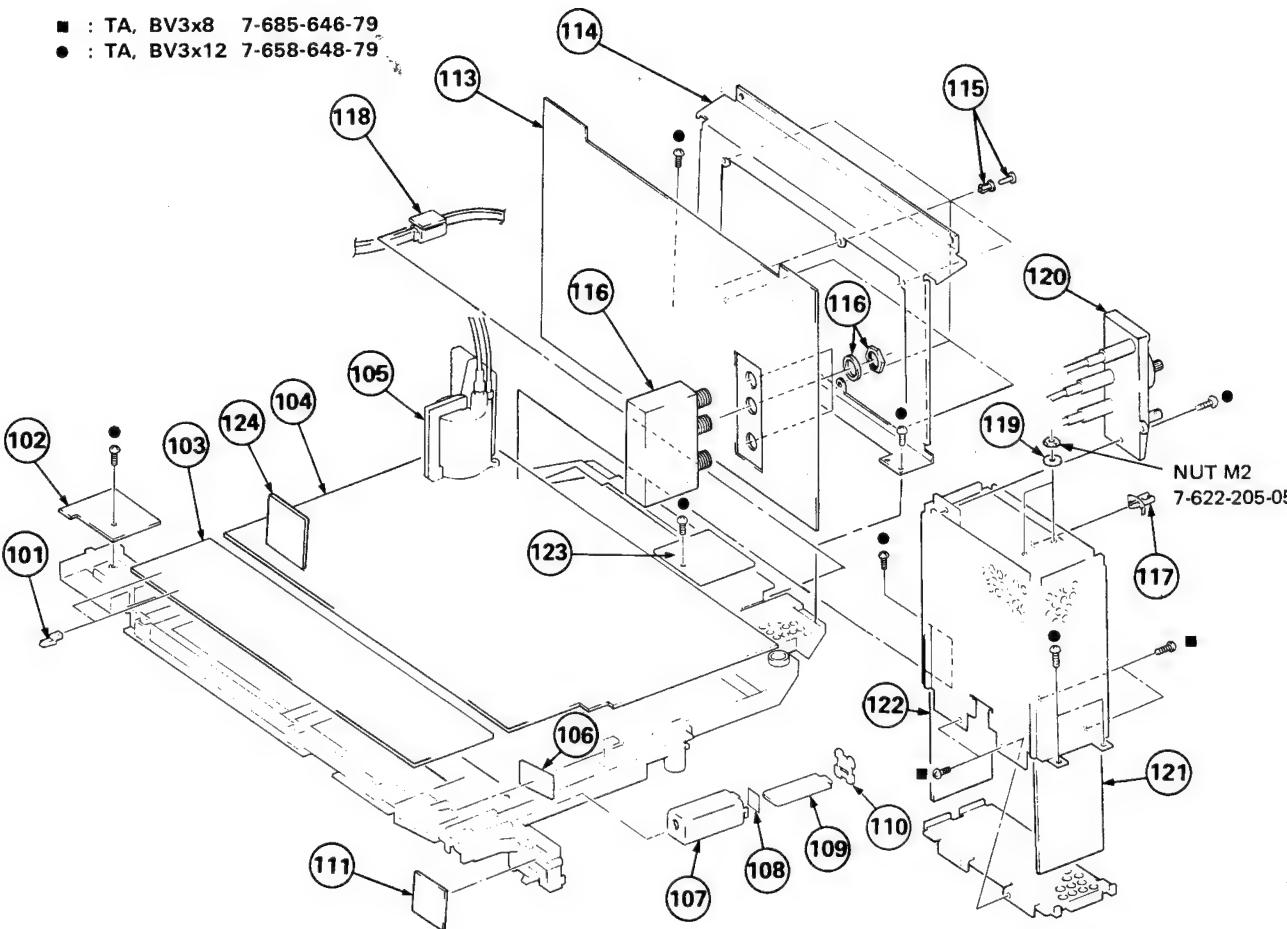
The components identified by shading and mark  are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

T1 T2 GA

6-3. CHASSIS

- : TA, BV3x8 7-685-646-79
- : TA, BV3x12 7-658-648-79



Remark	No.	Part No.	Description	Remark	No.	Part No.	Description	Remark
	101	4-374-205-01	BUTTON, SWITCH		113	A-1381-024-A	U BOARD COMPLETE	
	102	*1-613-413-11	Z BOARD		114	4-374-240-01	HOLDER, TERMINAL BOARD	
	103	*1-613-484-21	M BOARD		115	4-374-303-01	RIVET, NYLON	
	104	*A-1345-520-A	D BOARD COMPLETE		116	A-1-417-125-11	SELECTOR, ANTENNA	
	105	A-1-439-351-12	TRANSFORMER ASSY, FLYBACK		117	*3-644-407-00	CLIP, AC WIRE E	
	106	*1-613-485-21	T1 BOARD		118	A-4-022-115-01	HOLDER, AC CORD	
	107	*4-342-117-00	CASE, SHIELD (MAIN), R		119	3-845-490-00	WASHER	
	108	*4-333-624-00	FI'L M (N), SPECIAL		120	A-1-230-786-12	RESISTER ASSY, HIGH-VOLTAGE	
	109	*1-611-717-11	N BOARD		121	*1-613-478-11	GA BOARD	
	110	*4-342-118-00	LID, SHIELD CASE, R		122	*1-613-479-11	GB BOARD	
	111	*1-613-486-11	T2 BOARD		123	*1-613-477-21	K BOARD	
	124	*1-615-280-11	V BOARD					

The components identified by shading and mark **▲** are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque **▲** sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

NOTE:

The components identified by shading and mark **▲** are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque **▲** sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

SECTION 7

ELECTRICAL PARTS LIST

GB

When indicating parts by reference number, please include the board name.

- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- RESISTORS
 - All resistors are in ohms
 - F : nonflammable
- The components identified by **■** in this manual have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used.

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
	*1-613-485-21	T1 BOARD *****			R651 A-1-214-597-61	METAL OXIDE	100K 5% 2W F
	*4-345-836-00	HOLDER (S-2), LED			R652 1-212-370-00	METAL OXIDE	6.8 5% 1W F
		DIODE			R653 1-202-846-00	SOLID	470K 1/2W
					R654 1-212-370-00	METAL OXIDE	6.8 5% 1W F
					R655 A-1-206-439-61	METAL OXIDE	1 5% 2W F
	D1301	8-719-311-23 DIODE SEL112NP-N			R656 1-206-439-00	METAL OXIDE	1 5% 2W F
	D1302	8-719-311-23 DIODE SEL112NP-N			R660 1-202-846-00	SOLID	470K 1/2W
	D1303	8-719-114-34 DIODE SY432D			R662 1-207-451-00	WIREWOUND	0.1 10% 1/2W
	D1304	8-719-114-34 DIODE SY432D					

	*1-613-486-11	T2 BOARD *****			T651 A-1-421-704-11	CDT	
		SWITCH			T652 A-1-421-698-11	PRT	
		SI132A I-554-303-11 SWITCH, KEY BOARD					

	*1-613-478-11	GA BOARD *****			*1-613-479-11	GB BOARD *****	
		4-374-104-01 HOLDER, TR				1-533-087-00 HOLDER, FUSE	
		4-374-108-01 SPACER, MICA				*4-347-706-00 HEAT SINK (TR)	
		CAPACITOR				CAPACITOR	
	C651	1-101-821-00 CERAMIC	0.0022MF	5%	500V	C656 1-106-196-00 MYLAR	0.01MF 10% 100V
	C652	1-136-103-00 FILM	0.1MF		200V	C658 1-123-356-00 ELECT	10MF 20% 50V
	C653	1-101-821-00 CERAMIC	0.0022MF	5%	500V	C659 1-129-710-00 FILM	0.0047MF 10% 630V
	C654	1-136-103-00 FILM	0.1MF	5%	200V	C660 1-129-710-00 FILM	0.0047MF 10% 630V
	C655	1-136-131-00 FILM	0.12MF	5%	400V	C661 1-136-240-11 FILM	0.014MF 5% 1KV
	C671	1-101-821-00 CERAMIC	0.0022MF		500V	C662 1-125-294-00 ELECT(BLOCK)	560MF 20% 160V
	C672	1-102-038-00 CERAMIC	0.001MF		500V	C663 1-102-030-00 CERAMIC	330PF 10% 500V
	C673	1-102-038-00 CERAMIC	0.001MF		500V	C664 1-102-038-00 CERAMIC	0.001MF 500V
	C674	1-102-002-00 CERAMIC	680PF	10%	500V	C665 1-123-338-00 ELECT	2200MF 20% 25V
	C678	1-102-244-00 CERAMIC	220PF	10%	500V	C666 1-123-324-00 ELECT	1000MF 20% 16V
		DIODE				C667 1-106-359-00 MYLAR	0.0047MF 10% 200V
	D651	8-719-301-18 DIODE RM2CS				C669 1-123-348-00 ELECT	470MF 20% 35V
	D652	8-719-302-00 DIODE RU-2M				C675 1-102-212-00 CERAMIC	820PF 10% 500V
	D653	8-719-301-18 DIODE RM2CS				C676 1-102-212-00 CERAMIC	820PF 10% 500V
	D654	8-719-302-00 DIODE RU-2M					
	D661	8-719-300-45 DIODE EM-1Z				D655 8-719-300-09 DIODE CTU-24S	
		COIL				D656 8-719-903-06 DIODE ERC84-009	
	L651	1-425-612-00 COIL, ARE-CORE				D657 8-719-981-01 DIODE ERA81-004	
	L652	1-425-612-00 COIL, ARE-CORE				D658 8-719-302-00 DIODE RU-2M	
	L660	1-425-612-00 COIL, ARE-CORE				D659 8-719-302-00 DIODE RU-2M	
	L661	1-425-612-00 COIL, ARE-CORE					
		TRANSISTOR				F651 A-1-532-557-11 FUSE, GLASS TUBE 3.15A/125V	
	Q651	8-729-902-10 TRANSISTOR 2SC3317-S				MODULE	
	Q652	8-729-902-10 TRANSISTOR 2SC3317-S				IC651 A-1-235-444-11 MODULE, POWER (DM-20)	
		COIL					
	L653	1-421-459-00 COIL, CHOKE					

GB N A

Ref. No.	Part No.	Description					Remark	Ref. No.	Part No.	Description					Remark
L654	1-407-365-00	COIL, CHOKE						A8	*1-566-059-11	PIN, CONNECTOR 7P					
L656	1-459-155-00	COIL (WITH CORE) 45UH						A9	*1-566-058-11	PIN, CONNECTOR 6P					
L657	1-407-780-00	COIL, SPOOK CHOKE						A10	*1-566-055-11	PIN, CONNECTOR 3P					
L659	1-407-687-00	MICRO INDUCTOR 3.3UH						A11	*1-566-056-11	PIN, CONNECTOR 4P					
L662	1-407-780-00	COIL, SPOOK CHOKE						A12	*1-566-060-11	PIN, CONNECTOR 8P					
L663	1-407-780-00	COIL, SPOOK CHOKE						A13	*1-566-057-11	PIN, CONNECTOR 5P					
L664	1-459-155-00	COIL (WITH CORE) 45UH						A14	*1-566-059-11	PIN, CONNECTOR 7P					
<u>RESISTOR</u>															
R657	A 1-206-696-61	METAL OXIDE	22K	5%	2W	F									
R658	A 1-247-033-11	CARBON	100	5%	1/8W	F									
R659	1-247-033-11	CARBON	100	5%	1/8W	F									
R661	A 1-202-661-15	SOLID	4.7M	5%	1/2W										
<u>TRANSFORMER</u>															
T653	A 1-421-699-11	PIT													

*1-611-717-11 N BOARD															

<u>CAPACITOR</u>															
C1	1-123-611-00	ELECT	1MF	20%	50V			C101	1-102-816-00	CERAMIC	120PF	5%	50V		
C2	1-123-613-00	ELECT	3.3MF	20%	50V			C102	1-102-816-00	CERAMIC	120PF	5%	50V		
C3	1-102-820-00	CERAMIC	330PF	5%	50V			C103	1-102-074-00	CERAMIC	0.001MF	10%	50V		
C4	1-123-821-00	ELECT	47MF	20%	16V			C104	1-123-447-00	ELECT	0.22MF	20%	50V		
<u>DIODE</u>															
D1	8-719-110-32	DIODE PH302B						C106	1-123-380-00	ELECT	1MF	20%	50V		
<u>IC</u>															
IC1	8-759-602-54	IC CX20106A						C107	1-123-318-00	ELECT	33MF	20%	16V		
<u>RESISTOR</u>															
R1	1-247-799-00	CARBON	47	5%	1/6W			C108	1-101-001-00	CERAMIC	0.001MF	50V			
R2	1-247-775-00	CARBON	4.7	5%	1/6W			C109	1-102-976-00	CERAMIC	180PF	5%	50V		
R3	1-214-784-00	METAL	200K	1%	1/4W			C110	1-102-976-00	CERAMIC	180PF	5%	50V		
R4	1-249-433-11	CARBON	22K	5%	1/6W			C111	1-123-381-00	ELECT	2.2MF	20%	50V		

*A-1296-272-A A BOARD COMPLETE															

A 1-463-471-33 SYNTHESIZER UNIT, FREQUENCY															
*1-551-382-00 CABLE P-P															
*4-341-966-00 CASE, SHIELD, D.L															
<u>CONNECTOR</u>															
A1	*1-566-056-11	PIN, CONNECTOR 4P						C134	1-123-333-00	ELECT	100MF	20%	16V		
A2	*1-566-060-11	PIN, CONNECTOR 8P						C135	1-101-003-00	CERAMIC	0.0047MF	50V			
A3	*1-508-766-00	4P PLUG (M)						C137	1-123-356-00	ELECT	10MF	20%	16V		
A6	*1-566-056-11	PIN, CONNECTOR 4P						C138	1-123-356-00	ELECT	10MF	20%	16V		
A7	*1-566-054-11	PIN, CONNECTOR 2P						C139	1-123-356-00	ELECT	10MF	20%	16V		

The components identified by shading and mark  are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

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Ref.No.	Part No.	Description			Remark	Ref.No.	Part No.	Description			Remark
C146	1-123-333-00	ELECT	100MF	20%	16V	C247	1-123-333-00	ELECT	100MF	20%	16V
C147	1-101-001-00	CERAMIC	0.001MF		50V	C248	1-102-074-00	CERAMIC	0.001MF	10%	50V
C149	1-101-004-00	CERAMIC	0.01MF		50V	C249	1-123-380-00	ELECT	1MF	20%	50V
C150	1-101-004-00	CERAMIC	0.01MF		50V	C250	1-123-318-00	ELECT	33MF	20%	16V
C151	1-119-135-00	ELECT	220MF		16V	C251	1-123-333-00	ELECT	100MF	20%	16V
C152	1-123-356-00	ELECT	10MF	20%	16V	C252	1-123-306-00	ELECT	47MF	20%	6.3V
C153	1-123-333-00	ELECT	100MF	20%	16V	C301	1-123-356-00	ELECT	10MF	20%	16V
C154	1-123-356-00	ELECT	10MF	20%	16V	C302	1-102-965-00	CERAMIC	39PF	5%	50V
C155	1-161-323-00	CERAMIC	0.001MF	10%	50V	C303	1-101-884-00	CERAMIC	56PF	5%	50V
C156	1-123-356-00	ELECT	10MF	20%	16V	C304	1-123-380-00	ELECT	1MF	20%	50V
C157	1-123-380-00	ELECT	1MF	20%	50V	C305	1-123-380-00	ELECT	1MF	20%	50V
C158	1-106-180-00	MYLAR	0.0022MF	10%	100V	C306	1-123-356-00	ELECT	10MF	20%	25V
C159	1-102-824-00	CERAMIC	470PF	5%	50V	C308	1-102-129-00	CERAMIC	0.01MF	10%	50V
C162	1-102-951-00	CERAMIC	15PF	5%	50V	C309	1-102-973-00	CERAMIC	100PF	5%	50V
C201	1-102-121-00	CERAMIC	0.0022MF	10%	50V	C310	1-123-330-00	ELECT	22MF	20%	16V
C202	1-102-128-00	CERAMIC	0.0082MF	10%	50V	C311	1-161-047-00	CERAMIC	0.0047MF	10%	50V
C203	1-102-851-00	CERAMIC	15PF	5%	50V	C312	1-123-447-00	ELECT	0.22MF	20%	50V
C204	1-102-525-00	CERAMIC	68PF	5%	50V	C313	1-123-447-00	ELECT	0.22MF	20%	50V
C205	1-123-318-00	ELECT	33MF	20%	16V	C314	1-101-004-00	CERAMIC	0.01MF	50V	
C206	1-123-318-00	ELECT	33MF	20%	16V	C315	1-123-356-00	ELECT	10MF	20%	16V
C207	1-101-884-00	CERAMIC	56PF	5%	50V	C316	1-101-888-00	CERAMIC	68PF	5%	50V
C208	1-161-059-00	CERAMIC	0.047MF	10%	25V	C317	1-102-865-00	CERAMIC	8PF	0.5PF	50V
C209	1-102-824-00	CERAMIC	470PF	5%	50V	C318	1-102-074-00	CERAMIC	0.001MF	10%	50V
C211	1-102-121-00	CERAMIC	0.0022MF	10%	50V	C319	1-123-379-00	ELECT	0.47MF	20%	50V
C212	1-101-004-00	CERAMIC	0.01MF		50V	C320	1-121-806-00	ELECT	10MF	20%	16V
C213	1-161-059-00	CERAMIC	0.047MF	10%	25V	C321	1-123-379-00	ELECT	0.47MF	20%	50V
C214	1-102-121-00	CERAMIC	0.0022MF	10%	50V	C322	1-123-286-00	ELECT	0.33MF	20%	50V
C215	1-102-121-00	CERAMIC	0.0022MF	10%	50V	C323	1-123-379-00	ELECT	0.47MF	20%	50V
C216	1-102-525-00	CERAMIC	68PF	5%	50V	C324	1-123-357-00	ELECT	22MF	20%	50V
C217	1-123-586-00	ELECT	0.1MF	20%	50V	C325	1-123-380-00	ELECT	1MF	20%	50V
C218	1-123-586-00	ELECT	0.1MF	20%	50V	C326	1-102-947-00	CERAMIC	10PF	5%	50V
C219	1-102-634-11	CERAMIC	8PF	0.5PF	50V	C328	1-161-264-00	CERAMIC	27PF	5%	50V
C220	1-102-637-00	CERAMIC	12PF	5%	50V	C330	1-123-333-00	ELECT	100MF	20%	16V
C221	1-161-013-00	CERAMIC	0.01MF	10%	25V	C331	1-101-888-00	CERAMIC	68PF	5%	50V
C222	1-123-379-00	ELECT	0.47MF	20%	50V	C332	1-102-965-00	CERAMIC	39PF	5%	50V
C223	1-123-356-00	ELECT	10MF	20%	16V	C333	1-123-323-00	ELECT	470MF	20%	16V
C226	1-102-121-00	CERAMIC	0.0022MF	10%	50V	C334	1-123-380-00	ELECT	1MF	20%	50V
C228	1-123-330-00	ELECT	22MF	20%	16V	C338	1-102-963-00	CERAMIC	33PF	5%	50V
C231	1-102-121-00	CERAMIC	0.0022MF	10%	50V	C339	1-102-942-00	CERAMIC	5PF	0.5PF	50V
C232	1-102-959-00	CERAMIC	22PF	5%	50V	C340	1-123-324-00	ELECT	1000MF	20%	16V
C233	1-102-959-00	CERAMIC	22PF	5%	50V	C341	1-102-953-00	CERAMIC	18PF	5%	50V
C234	1-123-379-00	ELECT	0.47MF	20%	50V	C401	1-123-356-00	ELECT	10MF	20%	16V
C235	1-123-379-00	ELECT	0.47MF	20%	50V	C402	1-123-356-00	ELECT	10MF	20%	16V
C236	1-123-318-00	ELECT	33MF	20%	16V	C403	1-123-356-00	ELECT	10MF	20%	16V
C237	1-102-121-00	CERAMIC	0.0022MF	10%	50V	C404	1-123-324-00	ELECT	1000MF	20%	16V
C238	1-123-381-00	ELECT	2.2MF	20%	50V	C405	1-101-003-00	CERAMIC	0.0047MF		50V
C239	1-102-752-61	CERAMIC	30PF	5%	50V	C406	1-123-379-00	ELECT	0.47MF	20%	50V
C240	1-121-257-00	ELECT	4.7MF		16V	C407	1-123-379-00	ELECT	0.47MF	20%	50V
C241	1-102-973-00	CERAMIC	100PF	5%	50V	C408	1-123-379-00	ELECT	0.47MF	20%	50V
C243	1-102-816-00	CERAMIC	120PF	5%	50V	C410	1-101-004-00	CERAMIC	0.01MF		50V
C244	1-123-318-00	ELECT	33MF	20%	16V	C411	1-123-356-00	ELECT	10MF	20%	50V
C245	1-123-333-00	ELECT	100MF	20%	16V	C412	1-123-369-00	ELECT	4.7MF	20%	50V
C246	1-123-318-00	ELECT	33MF	20%	16V	C413	1-106-184-00	MYLAR	0.0033MF	10%	100V

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Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark	
C417	1-123-379-00	ELECT	0.47MF	20%	50V	IC104	8-759-909-50	IC CX7958
C418	1-101-003-00	CERAMIC	0.0047MF		50V	IC105	8-759-240-71	IC TC4071BP
C419	1-123-332-00	ELECT	47MF	20%	16V	IC106	8-752-320-11	IC CXK1001P
C421	1-123-380-00	ELECT	1MF	20%	50V	IC107	8-759-102-28	IC UPD6326C
C423	1-102-820-00	CERAMIC	330PF	5%	50V	IC201	8-752-001-41	IC CX20014A
C424	1-123-356-00	ELECT	10MF	20%	16V	IC202	8-752-013-90	IC CX20139
C426	1-123-356-00	ELECT	10MF	20%	16V	IC203	8-759-108-05	IC UPC78L05A
C427	1-101-001-00	CERAMIC	0.001MF		50V	IC301	8-758-480-00	IC CX848
C428	1-101-884-00	CERAMIC	56PF	5%	50V	IC302	8-759-913-11	IC CX20125
						IC401	8-752-010-00	IC CX20100
						IC402	8-759-240-53	IC TC40533BP
						IC403	8-759-145-58	IC UPC4558C
								<u>COIL</u>
						L101	1-407-717-00	MICRO INDUCTOR 1MMH
						L102	1-404-538-11	COIL
CV316	1-141-147-XX	CAP, TRIMMER				L103	1-408-398-00	MICRO INDUCTOR 1.2UH
						L104	1-408-403-00	MICRO INDUCTOR 3.3UH
						L105	1-408-403-00	MICRO INDUCTOR 3.3UH
D101	8-719-911-19	DIODE 1SS119				L107	1-410-016-11	MICRO INDUCTOR 3.9UH
D102	8-759-157-40	IC UPC574J				L108	1-410-016-11	MICRO INDUCTOR 3.9UH
D103	8-719-102-60	DIODE RD3.9E-N2				L109	1-410-016-11	MICRO INDUCTOR 3.9UH
D104	8-719-102-60	DIODE RD3.9E-N2				L110	1-408-429-00	MICRO INDUCTOR 470UH
D108	8-719-911-19	DIODE 1SS119				L111	1-408-417-00	MICRO INDUCTOR 47UH
D109	8-719-911-19	DIODE 1SS119				L112	1-408-421-00	MICRO INDUCTOR 100UH
D110	8-719-911-19	DIODE 1SS119				L113	1-407-179-00	MICRO INDUCTOR 1.2UH
D111	8-719-102-65	DIODE RD4.7E-N2				L114	1-407-178-XX	MICRO INDUCTOR 1UH
D112	8-719-101-04	DIODE RD33E-B2				L201	1-408-408-00	MICRO INDUCTOR 8.2UH
D117	8-719-102-71	DIODE RD5.6E-N2				L202	1-408-709-00	MICRO INDUCTOR 0.68UH
D119	8-719-911-19	DIODE 1SS119				L203	1-410-073-11	MICRO INDUCTOR 0.22UH
D202	8-719-911-19	DIODE 1SS119				L204	1-408-408-00	MICRO INDUCTOR 8.2UH
D203	8-719-102-90	DIODE RD10E-N2				L205	1-408-445-11	MICRO INDUCTOR 18UH
D204	8-719-103-06	DIODE RD13E-N2				L206	1-408-412-00	MICRO INDUCTOR 18UH
D205	8-719-911-19	DIODE 1SS119				L207	1-408-402-00	MICRO INDUCTOR 2.7UH
D251	8-719-102-71	DIODE RD5.6E-N2				L208	1-408-409-00	MICRO INDUCTOR 10UH
D402	8-719-911-19	DIODE 1SS119				L301	1-408-417-00	MICRO INDUCTOR 47UH
D403	8-719-911-19	DIODE 1SS119				L302	1-408-416-00	MICRO INDUCTOR 39UH
D404	8-719-911-19	DIODE 1SS119				L303	1-404-540-11	COIL
D405	8-719-911-19	DIODE 1SS119				L304	1-408-411-00	MICRO INDUCTOR 15UH
						L305	1-408-398-00	MICRO INDUCTOR 1.2UH
D406	8-719-911-19	DIODE 1SS119				L306	1-408-398-00	MICRO INDUCTOR 1.2UH
D407	8-719-911-19	DIODE 1SS119				L307	1-408-398-00	MICRO INDUCTOR 1.2UH
D408	8-719-911-19	DIODE 1SS119				L308	1-408-163-00	MICRO INDUCTOR 5.6MMH
D409	8-719-911-19	DIODE 1SS119				L309	1-408-419-00	MICRO INDUCTOR 68UH
D411	8-719-911-19	DIODE 1SS119				L310	1-408-409-00	MICRO INDUCTOR 10UH
						L311	1-408-416-00	MICRO INDUCTOR 39UH
DL301	1-415-356-11	DELAY LINE, 1H				L401	1-408-421-00	MICRO INDUCTOR 100UH
DL302	1-415-388-11	DELAY LINE, Y						
								<u>IC</u>
IC101	8-759-103-07	IC CX526-025						
IC102	8-759-800-65	IC LA7910						
IC103	8-759-912-82	IC CX530-507N						

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<u>Ref.No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>	<u>Ref.No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>
<u>TRANSISTOR</u>							
Q101	8-729-117-54	TRANSISTOR 2SA1175		Q411	8-729-117-54	TRANSISTOR 2SA1175	
Q102	8-729-178-54	TRANSISTOR 2SC2785		Q412	8-729-117-54	TRANSISTOR 2SA1175	
Q103	8-729-178-54	TRANSISTOR 2SC2785		Q413	8-729-117-54	TRANSISTOR 2SA1175	
Q104	8-729-117-54	TRANSISTOR 2SA1175		Q414	8-729-117-54	TRANSISTOR 2SA1175	
Q105	8-729-178-54	TRANSISTOR 2SC2785		Q415	8-729-178-54	TRANSISTOR 2SC2785	
Q106	8-729-178-54	TRANSISTOR 2SC2785		Q416	8-729-117-54	TRANSISTOR 2SA1175	
Q107	8-729-117-54	TRANSISTOR 2SA1175		Q417	8-729-178-54	TRANSISTOR 2SC2785	
Q108	8-729-178-54	TRANSISTOR 2SC2785		Q418	8-729-178-54	TRANSISTOR 2SC2785	
Q109	8-729-178-54	TRANSISTOR 2SC2785		Q419	8-729-178-54	TRANSISTOR 2SC2785	
Q110	8-729-178-54	TRANSISTOR 2SC2785		Q420	8-729-117-54	TRANSISTOR 2SA1175	
Q111	8-729-178-54	TRANSISTOR 2SC2785		Q421	8-729-117-54	TRANSISTOR 2SA1175	
Q113	8-729-117-54	TRANSISTOR 2SA1175		Q422	8-729-117-54	TRANSISTOR 2SA1175	
Q114	8-729-117-54	TRANSISTOR 2SA1175		Q423	8-729-117-54	TRANSISTOR 2SA1175	
Q115	8-729-117-54	TRANSISTOR 2SA1175		Q424	8-729-117-54	TRANSISTOR 2SA1175	
Q116	8-729-178-54	TRANSISTOR 2SC2785		Q426	8-729-600-27	TRANSISTOR 2SC634SP	
Q118	8-729-178-54	TRANSISTOR 2SC2785		Q427	8-729-600-27	TRANSISTOR 2SC634SP	
Q123	8-729-178-54	TRANSISTOR 2SC2785		Q428	8-729-600-27	TRANSISTOR 2SC634SP	
Q124	8-729-178-54	TRANSISTOR 2SC2785		Q429	8-729-117-54	TRANSISTOR 2SA1175	
Q125	8-729-117-54	TRANSISTOR 2SA1175		Q430	8-729-117-54	TRANSISTOR 2SA1175	
Q126	8-729-178-54	TRANSISTOR 2SC2785		Q431	8-729-600-27	TRANSISTOR 2SC634SP	
Q127	8-729-178-54	TRANSISTOR 2SC2785		Q432	8-729-117-54	TRANSISTOR 2SA1175	
<u>RESISTOR</u>							
Q128	8-729-178-54	TRANSISTOR 2SC2785		JW153	1-249-437-11	CARBON	47K 5% 1/6W
Q201	8-729-266-93	TRANSISTOR 2SC2669		JW154	1-249-437-11	CARBON	47K 5% 1/6W
Q202	8-729-117-54	TRANSISTOR 2SA1175		R001	1-247-711-11	CARBON	680 5% 1/4W
Q204	8-729-178-54	TRANSISTOR 2SC2785		R002	1-247-705-11	CARBON	270 5% 1/4W
Q205	8-729-117-54	TRANSISTOR 2SA1175		R003	1-247-705-11	CARBON	270 5% 1/4W
Q206	8-729-178-54	TRANSISTOR 2SC2785		R004	1-249-423-11	CARBON	3.3K 5% 1/6W
Q207	8-729-178-54	TRANSISTOR 2SC2785		R005	1-249-423-11	CARBON	3.3K 5% 1/6W
Q208	8-729-288-02	TRANSISTOR 2SD880		R006	1-249-462-11	CARBON	22K 5% 1/4W
Q209	8-729-201-78	TRANSISTOR 2SD1406		R007	1-247-719-11	CARBON	3.3K 5% 1/4W
Q251	8-729-288-02	TRANSISTOR 2SD880		R008	1-247-719-11	CARBON	3.3K 5% 1/4W
Q301	8-729-178-54	TRANSISTOR 2SC2785		R009	1-249-423-11	CARBON	3.3K 5% 1/6W
Q302	8-729-178-54	TRANSISTOR 2SC2785		R010	1-247-719-11	CARBON	3.3K 5% 1/4W
Q303	8-729-178-54	TRANSISTOR 2SC2785		R012	1-246-457-00	CARBON	220 5% 1/4W
Q304	8-729-178-54	TRANSISTOR 2SC2785		R014	1-247-715-11	CARBON	1.5K 5% 1/4W
Q305	8-729-178-54	TRANSISTOR 2SC2785		R015	1-247-847-00	CARBON	4.7K 5% 1/6W
Q306	8-729-178-54	TRANSISTOR 2SC2785		R016	1-247-725-11	CARBON	10K 5% 1/4W
Q308	8-729-178-54	TRANSISTOR 2SC2785		R020	1-247-839-00	CARBON	2.2K 5% 1/6W
Q309	8-729-178-54	TRANSISTOR 2SC2785		R021	1-247-717-11	CARBON	2.2K 5% 1/4W
Q310	8-729-178-54	TRANSISTOR 2SC2785		R022	1-247-839-00	CARBON	2.2K 5% 1/6W
Q311	8-729-178-54	TRANSISTOR 2SC2785		R023	1-247-839-00	CARBON	2.2K 5% 1/6W
Q313	8-729-117-54	TRANSISTOR 2SA1175		R025	1-247-713-11	CARBON	1K 5% 1/4W
Q394	8-729-178-54	TRANSISTOR 2SC2785		R026	1-249-429-11	CARBON	10K 5% 1/6W
Q403	8-729-117-54	TRANSISTOR 2SA1175		R027	1-249-435-11	CARBON	33K 5% 1/6W
Q404	8-729-117-54	TRANSISTOR 2SA1175		R028	1-247-713-11	CARBON	1K 5% 1/4W
Q405	8-729-117-54	TRANSISTOR 2SA1175		R100	1-247-895-00	CARBON	470K 5% 1/6W
Q406	8-729-117-54	TRANSISTOR 2SA1175		R106	1-249-425-11	CARBON	4.7K 5% 1/6W
Q407	8-729-117-54	TRANSISTOR 2SA1175		R107	1-247-717-11	CARBON	2.2K 5% 1/4W
Q408	8-729-600-27	TRANSISTOR 2SC634SP		R108	1-247-717-11	CARBON	2.2K 5% 1/4W
Q409	8-729-600-27	TRANSISTOR 2SC634SP		R109	1-249-429-11	CARBON	10K 5% 1/6W
Q410	8-729-600-27	TRANSISTOR 2SC634SP		R110	1-249-429-11	CARBON	10K 5% 1/6W
				R111	1-247-823-00	CARBON	470 5% 1/6W
				R112	1-247-885-00	CARBON	180K 5% 1/6W

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Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark
R113	1-249-429-11	CARBON	10K 5% 1/6W	R169	1-247-725-11	CARBON	10K 5% 1/4W
R114	1-247-717-11	CARBON	2.2K 5% 1/4W	R170	1-247-725-11	CARBON	10K 5% 1/4W
R115	1-247-819-00	CARBON	330 5% 1/6W	R171	1-247-829-00	CARBON	820 5% 1/6W
R118	1-247-713-11	CARBON	1K 5% 1/4W	R172	1-249-465-11	CARBON	47K 5% 1/4W
R119	1-249-417-11	CARBON	1K 5% 1/6W	R173	1-249-465-11	CARBON	47K 5% 1/4W
R120	1-249-437-11	CARBON	47K 5% 1/6W	R174	1-249-429-11	CARBON	10K 5% 1/6W
R121	1-249-437-11	CARBON	47K 5% 1/6W	R175	1-247-725-11	CARBON	10K 5% 1/4W
R122	1-249-462-11	CARBON	22K 5% 1/4W	R176	1-247-891-00	CARBON	330K 5% 1/6W
R123	1-247-717-11	CARBON	2.2K 5% 1/4W	R177	1-249-429-11	CARBON	10K 5% 1/6W
R124	1-247-849-00	CARBON	5.6K 5% 1/6W	R178	1-247-717-11	CARBON	2.2K 5% 1/4W
R125	1-247-726-11	CARBON	33K 5% 1/4W	R179	1-247-717-11	CARBON	2.2K 5% 1/4W
R126	1-247-851-00	CARBON	6.8K 5% 1/6W	R180	1-247-839-00	CARBON	2.2K 5% 1/6W
R127	1-249-419-11	CARBON	1.5K 5% 1/6W	R181	1-247-839-00	CARBON	2.2K 5% 1/6W
R128	1-247-857-00	CARBON	12K 5% 1/6W	R182	1-247-839-00	CARBON	2.2K 5% 1/6W
R129	1-249-429-11	CARBON	10K 5% 1/6W	R183	1-249-440-11	CARBON	82K 5% 1/6W
R130	1-247-726-11	CARBON	33K 5% 1/4W	R185	1-249-429-11	CARBON	10K 5% 1/6W
R131	1-247-887-00	CARBON	220K 5% 1/6W	R186	1-249-429-11	CARBON	10K 5% 1/6W
R132	1-247-724-11	CARBON	8.2K 5% 1/4W	R187	1-247-839-00	CARBON	2.2K 5% 1/6W
R133	1-247-873-00	CARBON	56K 5% 1/6W	R188	1-247-839-00	CARBON	2.2K 5% 1/6W
R134	1-247-895-00	CARBON	470K 5% 1/6W	R189	1-247-839-00	CARBON	2.2K 5% 1/6W
R135	1-247-895-00	CARBON	470K 5% 1/6W	R190	1-249-429-11	CARBON	10K 5% 1/6W
R136	1-247-889-00	CARBON	270K 5% 1/6W	R191	1-249-423-11	CARBON	3.3K 5% 1/6W
R137	1-247-839-00	CARBON	2.2K 5% 1/6W	R192	1-249-425-11	CARBON	4.7K 5% 1/6W
R138	1-247-710-11	CARBON	560 5% 1/4W	R193	1-244-877-51	CARBON	1.5K 5% 1/2W
R139	1-247-717-11	CARBON	2.2K 5% 1/4W	R194	1-249-437-11	CARBON	47K 5% 1/6W
R140	1-247-717-11	CARBON	2.2K 5% 1/4W	R196	1-249-437-11	CARBON	47K 5% 1/6W
R142	1-246-449-25	CARBON	100 5% 1/4W	R197	1-249-437-11	CARBON	47K 5% 1/6W
R143	1-247-717-11	CARBON	2.2K 5% 1/4W	R198	1-249-433-11	CARBON	22K 5% 1/6W
R144	1-249-429-11	CARBON	10K 5% 1/6W	R199	1-249-429-11	CARBON	10K 5% 1/6W
R145	1-249-441-11	CARBON	100K 5% 1/6W	R201	1-249-420-11	CARBON	1.8K 5% 1/6W
R146	1-246-465-25	CARBON	470 5% 1/4W	R202	1-247-857-00	CARBON	12K 5% 1/6W
R147	1-246-465-25	CARBON	470 5% 1/4W	R203	1-249-429-11	CARBON	10K 5% 1/6W
R148	1-246-465-25	CARBON	470 5% 1/4W	R204	1-215-457-00	METAL	33K 1% 1/6W
R149	1-247-719-11	CARBON	3.3K 5% 1/4W	R205	1-215-457-00	METAL	33K 1% 1/6W
R150	1-247-719-11	CARBON	3.3K 5% 1/4W	R206	1-249-433-11	CARBON	22K 5% 1/6W
R151	1-246-457-00	CARBON	220 5% 1/4W	R208	1-247-883-00	CARBON	150K 5% 1/6W
R152	1-249-437-11	CARBON	47K 5% 1/6W	R209	1-247-883-00	CARBON	150K 5% 1/6W
R153	1-249-429-11	CARBON	10K 5% 1/6W	R211	1-249-417-11	CARBON	1K 5% 1/6W
R154	1-249-437-11	CARBON	47K 5% 1/6W	R215	1-247-883-00	CARBON	150K 5% 1/6W
R155	1-249-437-11	CARBON	47K 5% 1/6W	R216	1-247-815-00	CARBON	220 5% 1/6W
R156	1-247-887-00	CARBON	220K 5% 1/6W	R218	1-247-845-00	CARBON	3.9K 5% 1/6W
R157	1-249-433-11	CARBON	22K 5% 1/6W	R219	1-247-817-00	CARBON	270 5% 1/6W
R158	1-249-437-11	CARBON	47K 5% 1/6W	R220	1-247-801-00	CARBON	56 5% 1/6W
R159	1-247-889-00	CARBON	270K 5% 1/6W	R221	1-247-822-00	CARBON	430 5% 1/6W
R160	1-249-441-11	CARBON	100K 5% 1/6W	R223	1-247-821-00	CARBON	390 5% 1/6W
R161	1-247-713-11	CARBON	1K 5% 1/4W	R224	1-247-830-00	CARBON	910 5% 1/6W
R162	1-247-713-11	CARBON	1K 5% 1/4W	R225	1-249-415-11	CARBON	680 5% 1/6W
R163	1-247-713-11	CARBON	1K 5% 1/4W	R226	1-249-405-11	CARBON	100 5% 1/6W
R164	1-247-839-00	CARBON	2.2K 5% 1/6W	R227	1-249-415-11	CARBON	680 5% 1/6W
R165	1-247-839-00	CARBON	2.2K 5% 1/6W	R228	1-247-833-00	CARBON	1.2K 5% 1/6W
R166	1-249-452-11	CARBON	2.7 5% 1/4W	R229	1-247-803-00	CARBON	68 5% 1/6W
R167	1-206-696-00	METAL OXIDE	22K 5% 2W F	R230	1-249-423-11	CARBON	3.3K 5% 1/6W
R168	1-247-717-11	CARBON	2.2K 5% 1/4W	R231	1-247-846-00	CARBON	4.3K 5% 1/6W

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Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
R232	1-247-851-00	CARBON	6.8K 5% 1/6W	R341	1-247-857-00	CARBON	12K 5% 1/6W
R234	1-247-839-00	CARBON	2.2K 5% 1/6W	R342	1-249-429-11	CARBON	10K 5% 1/6W
R235	1-247-821-00	CARBON	390 5% 1/6W	R345	1-247-725-11	CARBON	10K 5% 1/4W
R236	1-246-449-25	CARBON	100 5% 1/4W	R346	1-246-457-00	CARBON	220 5% 1/4W
R237	1-247-795-00	CARBON	33 5% 1/6W	R347	1-247-839-00	CARBON	2.2K 5% 1/6W
R238	1-249-425-11	CARBON	4.7K 5% 1/6W	R348	1-247-815-00	CARBON	220 5% 1/6W
R239	1-247-819-00	CARBON	330 5% 1/6W	R349	1-249-437-11	CARBON	47K 5% 1/6W
R241	1-212-367-00	METAL OX IDE	3.9 5% 1W F	R350	1-247-815-00	CARBON	220 5% 1/6W
R242	1-206-495-00	METAL OX IDE	2.2 5% 3W F	R351	1-247-829-00	CARBON	820 5% 1/6W
R243	1-247-821-00	CARBON	390 5% 1/6W	R352	1-247-725-11	CARBON	10K 5% 1/4W
R244	1-246-457-00	CARBON	220 5% 1/4W	R353	1-249-433-11	CARBON	22K 5% 1/6W
R245	1-249-414-11	CARBON	560 5% 1/6W	R354	1-246-536-00	CARBON	430K 5% 1/4W
R250	1-206-453-00	METAL OX IDE	3.9 5% 2W F	R356	1-246-517-25	CARBON	68K 5% 1/4W
R251	1-247-706-11	CARBON	330 5% 1/4W	R357	1-247-903-00	CARBON	1M 5% 1/6W
R256	1-247-025-00	CARBON	3.9 5% 1/8W F	R359	1-249-415-11	CARBON	680 5% 1/6W
R300	1-249-405-11	CARBON	100 5% 1/6W	R360	1-249-415-11	CARBON	680 5% 1/6W
R301	1-249-435-11	CARBON	33K 5% 1/6W	R361	1-247-823-00	CARBON	470 5% 1/6W
R302	1-249-434-11	CARBON	27K 5% 1/6W	R362	1-247-833-00	CARBON	1.2K 5% 1/6W
R303	1-247-833-00	CARBON	1.2K 5% 1/6W	R363	1-247-819-00	CARBON	330 5% 1/6W
R304	1-247-823-00	CARBON	470 5% 1/6W	R364	1-247-833-00	CARBON	1.2K 5% 1/6W
R305	1-247-833-00	CARBON	1.2K 5% 1/6W	R365	1-249-420-11	CARBON	1.8K 5% 1/6W
R306	1-249-419-11	CARBON	1.5K 5% 1/6W	R366	1-249-422-11	CARBON	2.7K 5% 1/6W
R307	1-249-415-11	CARBON	680 5% 1/6W	R367	1-249-425-11	CARBON	4.7K 5% 1/6W
R308	1-249-415-11	CARBON	680 5% 1/6W	R377	1-247-708-11	CARBON	470 5% 1/4W
R309	1-249-415-11	CARBON	680 5% 1/6W	R380	1-249-435-11	CARBON	33K 5% 1/6W
R310	1-249-415-11	CARBON	680 5% 1/6W	R381	1-249-435-11	CARBON	33K 5% 1/6W
R311	1-247-833-00	CARBON	1.2K 5% 1/6W	R382	1-249-429-11	CARBON	10K 5% 1/6W
R312	1-247-833-00	CARBON	1.2K 5% 1/6W	R401	1-246-457-00	CARBON	220 5% 1/4W
R313	1-249-419-11	CARBON	1.5K 5% 1/6W	R402	1-246-457-00	CARBON	220 5% 1/4W
R314	1-249-419-11	CARBON	1.5K 5% 1/6W	R403	1-246-457-00	CARBON	220 5% 1/4W
R315	1-247-833-00	CARBON	1.2K 5% 1/6W	R404	1-247-849-00	CARBON	5.6K 5% 1/6W
R316	1-247-833-00	CARBON	1.2K 5% 1/6W	R405	1-247-839-00	CARBON	2.2K 5% 1/6W
R317	1-249-417-11	CARBON	1K 5% 1/6W	R406	1-247-833-00	CARBON	1.2K 5% 1/6W
R318	1-249-422-11	CARBON	2.7K 5% 1/6W	R408	1-247-839-00	CARBON	2.2K 5% 1/6W
R319	1-249-422-11	CARBON	2.7K 5% 1/6W	R410	1-215-406-00	METAL	240 1% 1/6W
R320	1-249-422-11	CARBON	2.7K 5% 1/6W	R411	1-214-717-00	METAL	330 1% 1/4W
R321	1-247-899-00	CARBON	680K 5% 1/6W	R412	1-249-417-11	CARBON	1K 5% 1/6W
R323	1-247-720-11	CARBON	3.9K 5% 1/4W	R414	1-249-469-11	CARBON	100K 5% 1/4W
R324	1-247-706-11	CARBON	330 5% 1/4W	R416	1-246-523-00	CARBON	120K 5% 1/4W
R325	1-249-433-11	CARBON	22K 5% 1/6W	R417	1-249-462-11	CARBON	22K 5% 1/4W
R326	1-249-423-11	CARBON	3.3K 5% 1/6W	R418	1-249-429-11	CARBON	10K 5% 1/6W
R327	1-247-845-00	CARBON	3.9K 5% 1/6W	R419	1-249-469-11	CARBON	100K 5% 1/4W
R328	1-247-829-00	CARBON	820 5% 1/6W	R420	1-249-425-11	CARBON	4.7K 5% 1/6W
R329	1-247-839-00	CARBON	2.2K 5% 1/6W	R421	1-214-717-00	METAL	330 1% 1/4W
R331	1-249-405-11	CARBON	100 5% 1/6W	R422	1-249-462-11	CARBON	22K 5% 1/4W
R332	1-247-821-00	CARBON	390 5% 1/6W	R423	1-249-437-11	CARBON	47K 5% 1/6W
R333	1-249-433-11	CARBON	22K 5% 1/6W	R424	1-247-713-11	CARBON	1K 5% 1/4W
R334	1-247-829-00	CARBON	820 5% 1/6W	R425	1-247-839-00	CARBON	2.2K 5% 1/6W
R335	1-249-417-11	CARBON	1K 5% 1/6W	R426	1-249-468-11	CARBON	82K 5% 1/4W
R336	1-247-897-00	CARBON	560K 5% 1/6W	R427	1-247-725-11	CARBON	10K 5% 1/4W
R337	1-247-895-00	CARBON	470K 5% 1/6W	R428	1-247-883-00	CARBON	150K 5% 1/6W
R339	1-247-819-00	CARBON	330 5% 1/6W	R429	1-247-712-11	CARBON	820 5% 1/4W
R340	1-249-437-11	CARBON	47K 5% 1/6W	R431	1-247-725-11	CARBON	10K 5% 1/4W



Ref. No.	Part No.	Description			Remark	Ref. No.	Part No.	Description			Remark	
R435	1-246-457-00	CARBON	220	5%	1/4W		RV302	1-228-719-00	RES, ADJ, CERAMIC	CARBON 4.7K		
R436	1-246-457-00	CARBON	220	5%	1/4W		RV303	1-228-724-00	RES, ADJ, CERAMIC	CARBON 10K		
R437	1-246-488-00	CARBON	4.3K	5%	1/4W		RV304	1-228-724-00	RES, ADJ, CERAMIC	CARBON 10K		
R438	1-214-913-00	METAL	100K	1%	1/2W		RV401	1-228-724-00	RES, ADJ, CERAMIC	CARBON 10K		
R439	1-214-717-00	METAL	330	1%	1/4W		RV402	1-228-724-00	RES, ADJ, CERAMIC	CARBON 10K		
R440	1-249-423-11	CARBON	3.3K	5%	1/6W		RV403	1-228-723-00	RES, ADJ, CERAMIC	CARBON 4.7K		
R441	1-249-423-11	CARBON	3.3K	5%	1/6W		RV404	1-228-719-00	RES, ADJ, CERAMIC	CARBON 4.7K		
R442	1-249-423-11	CARBON	3.3K	5%	1/6W		RV405	1-228-719-00	RES, ADJ, CERAMIC	CARBON 4.7K		
R443	1-247-834-00	CARBON	1.3K	5%	1/6W		RV407	1-228-722-00	RES, ADJ, CERAMIC	CARBON 3.3K		
R444	1-249-415-11	CARBON	680	5%	1/6W						<u>TRANSFORMER</u>	
R445	1-247-833-00	CARBON	1.2K	5%	1/6W		T201	1-404-541-11	COIL			
R449	1-249-429-11	CARBON	10K	5%	1/6W		T202	1-404-467-00	COIL, VIF			
R450	1-249-441-11	CARBON	100K	5%	1/6W		T203	1-404-467-00	COIL, VIF			
R451	1-249-441-11	CARBON	100K	5%	1/6W		T204	1-404-505-00	COIL			
R452	1-249-441-11	CARBON	100K	5%	1/6W		T205	1-404-489-00	COIL			
R453	1-247-849-00	CARBON	5.6K	5%	1/6W		T301	1-425-786-00	TRANSFORMER, BANDPASS(BPT)			
R454	1-249-441-11	CARBON	100K	5%	1/6W						<u>TUNER</u>	
R455	1-215-453-00	METAL	22K	1%	1/6W						TU101A 1-463-470-00 TUNER, ET (BT-896)	
R456	1-215-432-00	METAL	3K	1%	1/6W							
R457	1-215-421-00	METAL	1K	1%	1/6W							
R459	1-247-869-00	CARBON	39K	5%	1/6W						<u>CRYSTAL</u>	
R460	1-249-429-11	CARBON	10K	5%	1/6W		X101	1-567-192-11	OSCILLATOR, CERAMIC			
R461	1-249-425-11	CARBON	4.7K	5%	1/6W		X102	1-567-254-11	OSCILLATOR, CERAMIC			
R462	1-249-417-11	CARBON	1K	5%	1/6W		X301	1-527-722-00	OSCILLATOR, CRYSTAL			
R463	1-249-417-11	CARBON	1K	5%	1/6W							
R464	1-246-449-25	CARBON	100	5%	1/4W							
R465	1-246-449-25	CARBON	100	5%	1/4W						*****	
R466	1-246-449-25	CARBON	100	5%	1/4W						*****	
R467	1-246-445-00	CARBON	68	5%	1/4W						*1-613-484-21 M BOARD	
R468	1-246-445-00	CARBON	68	5%	1/4W						*****	
R469	1-246-445-00	CARBON	68	5%	1/4W						<u>CAPACITOR</u>	
R470	1-247-899-00	CARBON	680K	5%	1/6W		C1301	1-102-978-00	CERAMIC	220PF	5%	50V
R471	1-249-429-11	CARBON	10K	5%	1/6W		C1302	1-102-978-00	CERAMIC	220PF	5%	50V
R472	1-247-891-00	CARBON	330K	5%	1/6W		C1303	1-101-004-00	CERAMIC	0.01MF		50V
R475	1-247-713-11	CARBON	1K	5%	1/4W		C1304	1-123-318-00	ELECT.	33MF	20%	16V
R476	1-247-713-11	CARBON	1K	5%	1/4W		C1305	1-106-367-00	MYLAR	0.01MF	10%	100V
R477	1-247-713-11	CARBON	1K	5%	1/4W							
R478	1-247-713-11	CARBON	1K	5%	1/4W		C1306	1-123-333-00	ELECT	100MF	20%	16V
R479	1-247-721-11	CARBON	4.7K	5%	1/4W		C1307	1-102-822-00	CERAMIC	390PF	5%	50V
R480	1-215-406-00	METAL	240	1%	1/6W		C1308	1-101-888-00	CERAMIC	68PF	5%	50V
R481	1-247-805-00	CARBON	82	5%	1/6W						<u>DIODE</u>	
R482	1-249-423-11	CARBON	3.3K	5%	1/6W		D1305	8-719-911-19	DIODE 1SS119			
R483	1-249-423-11	CARBON	3.3K	5%	1/6W		D1306	8-719-911-19	DIODE 1SS119			
R486	1-247-815-00	CARBON	220	5%	1/6W		D1307	8-719-911-19	DIODE 1SS119			
R487B	1-247-804-00	CARBON	75	5%	1/6W		D1308	8-719-911-19	DIODE 1SS119			
R488	1-247-717-11	CARBON	2.2K	5%	1/4W		D1310	8-719-911-19	DIODE 1SS119			
R490	1-249-462-11	CARBON	22K	5%	1/4W		D1313	8-719-911-19	DIODE 1SS119			
R493	1-249-433-11	CARBON	22K	5%	1/6W		D1314	8-719-911-19	DIODE 1SS119			
		<u>VARIABLE RESISTOR</u>					D1316	8-719-911-19	DIODE 1SS119			
RV201	1-228-723-00	RES, ADJ, CERAMIC					D1317	8-719-911-19	DIODE 1SS119			
RV202	1-228-723-00	RES, ADJ, CERAMIC					D1320	8-719-911-19	DIODE 1SS119			
RV203	1-228-720-00	RES, ADJ, CERAMIC					D1321	8-719-911-19	DIODE 1SS119			

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M C

Ref. No.	Part No.	Description					Remark	Ref. No.	Part No.	Description					Remark	
D1322	8-719-102-58	DIODE	RD3.6E-N2							<u>SWITCH</u>						
			<u>IC</u>					S1301	1-553-976-00	SWITCH, PUSH						
IC1301	8-759-909-49	IC	CX23040					S1302	1-553-976-00	SWITCH, PUSH						
			<u>COIL</u>					S1303	1-553-976-00	SWITCH, PUSH						
L1301	1-407-705-00	MICRO INDUCTOR	100UH					S1304	1-553-976-00	SWITCH, PUSH						
			<u>CONNECTOR</u>					S1305	1-570-061-11	SWITCH, PUSH (8 KEY)						
M1	*1-566-055-11	PIN, CONNECTOR	3P					S1306	1-570-061-11	SWITCH, PUSH (8 KEY)						
M2	*1-566-055-11	PIN, CONNECTOR	3P					S1307	1-570-061-11	SWITCH, PUSH (8 KEY)						
M3	*1-566-058-11	PIN, CONNECTOR	6P					S1308	1-570-061-11	SWITCH, PUSH (8 KEY)						
M5	*1-566-056-11	PIN, CONNECTOR	4P					S1309	1-553-976-00	SWITCH, PUSH						
			<u>TRANSISTOR</u>					S1310	1-570-061-11	SWITCH, PUSH (8 KEY)						
Q1301	8-729-178-54	TRANSISTOR	2SC2785					S1311	1-553-976-00	SWITCH, PUSH						
Q1302	8-729-178-54	TRANSISTOR	2SC2785					S1312	1-570-061-11	SWITCH, PUSH (8 KEY)						
Q1303	8-729-178-54	TRANSISTOR	2SC2785					S1313	1-570-061-11	SWITCH, PUSH (8 KEY)						
			<u>RESISTOR</u>					S1316	1-570-062-11	SWITCH, PUSH (2 KEY)						
R1301	1-247-717-11	CARBON		2.2K	5%	1/4W		S1317	1-570-062-11	SWITCH, PUSH (2 KEY)						
R1302	1-247-717-11	CARBON		2.2K	5%	1/4W		S1319	1-570-061-11	SWITCH, PUSH (8 KEY)						
R1303	1-247-717-11	CARBON		2.2K	5%	1/4W		S1321	1-554-824-11	SWITCH, PUSH (1 KEY)						
R1304	1-247-717-11	CARBON		2.2K	5%	1/4W		S1322	1-554-824-11	SWITCH, PUSH (1 KEY)						
R1305	1-247-717-11	CARBON		2.2K	5%	1/4W									<u>CRYSTAL</u>	
R1306	1-247-717-11	CARBON		2.2K	5%	1/4W		X1301	1-527-476-00	OSCILLATOR, CERAMIC						
R1307	1-247-717-11	CARBON		2.2K	5%	1/4W									*****	
R1308	1-247-717-11	CARBON		2.2K	5%	1/4W									*A-1330-561-A C BOARD COMPLETE	
R1309	1-247-717-11	CARBON		2.2K	5%	1/4W									*****	
R1310	1-247-717-11	CARBON		2.2K	5%	1/4W									▲ 1-526-798-12 SOCKET, CRT	
															*4-374-225-01 COVER (REAR LID), CV CONTROL	
															*4-374-227-01 COVER (MAIN), CV CONTROL	
															<u>CONNECTOR</u>	
R1311	1-247-717-11	CARBON		2.2K	5%	1/4W		C1	*1-506-371-00	2P PLUG (L)						
R1312	1-249-465-11	CARBON		47K	5%	1/4W									<u>CAPACITOR</u>	
R1313	1-249-469-11	CARBON		100K	5%	1/4W										
R1314	1-247-717-11	CARBON		2.2K	5%	1/4W										
R1315	1-246-529-00	CARBON		220K	5%	1/4W										
R1316	1-247-721-11	CARBON		4.7K	5%	1/4W		C701	1-129-714-00	FiLM	0.01MF	10%	630V			
R1317	1-247-714-11	CARBON		1.2K	5%	1/4W		C702	1-162-116-00	CERAMIC	680PF	10%	2KV			
R1318	1-246-465-25	CARBON		470	5%	1/4W		C703	1-162-114-00	CERAMIC	0.0047MF		2KV			
R1319	1-246-449-25	CARBON		100	5%	1/4W		C704	1-123-356-00	ELECT	10MF	20%	50V			
R1320	1-247-725-11	CARBON		10K	5%	1/4W		C705	1-102-074-00	CERAMIC	0.001MF	10%	50V			
R1321	1-246-465-25	CARBON		470	5%	1/4W		C706	1-102-074-00	CERAMIC	0.001MF	10%	50V			
R1322	1-247-717-11	CARBON		2.2K	5%	1/4W		C707	1-102-074-00	CERAMIC	0.001MF	10%	50V			
R1323	1-247-717-11	CARBON		2.2K	5%	1/4W		C708	1-102-116-00	CERAMIC	680PF	10%	50V			
R1324	1-247-717-11	CARBON		2.2K	5%	1/4W		C709	1-102-115-00	CERAMIC	560PF	10%	50V			
R1325	1-247-725-11	CARBON		10K	5%	1/4W		C710	1-102-115-00	CERAMIC	560PF	10%	50V			
R1326	1-249-462-11	CARBON		22K	5%	1/4W		C711	1-101-006-00	CERAMIC	0.047MF		50V			
R1327	1-247-706-11	CARBON		330	5%	1/4W		C712	1-123-356-00	ELECT	10MF	20%	25V			
R1328	1-247-692-11	CARBON		22	5%	1/4W		C713	1-123-447-00	ELECT	0.22MF	20%	50V			
R1329	1-249-460-11	CARBON		15K	5%	1/4W		C714	1-161-830-00	CERAMIC	0.0047MF		500V			
R1336	1-247-713-11	CARBON		1K	5%	1/4W										
															<u>DIODE</u>	
								D701	8-719-911-19	DIODE	1SS119					

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Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark				
D702	8-719-911-19	DIODE 1SS119									
D703	8-719-911-19	DIODE 1SS119									
<u>COIL</u>											
L701	1-408-417-00	MICRO INDUCTOR 47UH		RV701A	1-230-619-11	RES, ADJ, METAL GLAZE 110M					
L702	1-407-701-00	MICRO INDUCTOR 47UH		RV702	1-230-104-00	RES, ADJ, CARBON 4.7K					
L703	1-407-701-00	MICRO INDUCTOR 47UH		RV703	1-230-617-11	RES, ADJ, CARBON 1K					
L704	1-407-701-00	MICRO INDUCTOR 47UH		RV704	1-230-104-00	RES, ADJ, CARBON 4.7K					
L705	1-407-699-00	MICRO INDUCTOR 33UH		RV705	1-230-617-11	RES, ADJ, CARBON 1K					
L706	1-407-699-00	MICRO INDUCTOR 33UH		RV706	1-230-104-00	RES, ADJ, CARBON 4.7K					
L707	1-407-699-00	MICRO INDUCTOR 33UH		RV707	1-230-105-00	RES, ADJ, CARBON 3.3K					
<u>TRANSISTOR</u>											
Q701	8-729-178-54	TRANSISTOR 2SC2785		<u>SPARK GAP</u>							
Q702	8-729-326-11	TRANSISTOR 2SC2611		SG701	1-519-030-00	DISCHARGE ELEMENT					
Q703	8-729-178-54	TRANSISTOR 2SC2785		SG702	1-519-030-00	DISCHARGE ELEMENT					
Q704	8-729-326-11	TRANSISTOR 2SC2611		SG703	1-519-030-00	DISCHARGE ELEMENT					
Q705	8-729-178-54	TRANSISTOR 2SC2785		*****							
Q706	8-729-326-11	TRANSISTOR 2SC2611		*A-1345-520-A	D BOARD COMPLETE						
<u>RESISTOR</u>											
R701	1-202-838-00	SOLID	100K	1/2W							
R702	1-212-364-00	METAL OXIDE	2.2	5%	1W	F					
R703	1-202-842-11	SOLID	220K		1/2W						
R704	1-202-846-00	SOLID	470K		1/2W						
R705	1-202-837-00	SOLID	82K		1/2W						
R706	1-202-549-00	SOLID	100	10%	1/2W						
R708	1-202-824-00	SOLID	3.3K		1/2W						
R709	1-202-824-00	SOLID	3.3K		1/2W						
R711	1-247-819-00	CARBON	330	5%	1/6W						
R712	1-247-819-00	CARBON	330	5%	1/6W						
R713	1-202-824-00	SOLID	3.3K		1/2W						
R714	1-246-449-25	CARBON	100	5%	1/4W						
R715	1-247-839-00	CARBON	2.2K	5%	1/6W						
R716	1-247-817-00	CARBON	270	5%	1/6W						
R719	1-249-419-11	CARBON	1.5K	5%	1/6W						
R720	1-247-817-00	CARBON	270	5%	1/6W						
R722	1-206-747-00	METAL OXIDE	8.2K	5%	3W	F					
R723	1-247-817-00	CARBON	270	5%	1/6W						
R725	1-247-839-00	CARBON	2.2K	5%	1/6W						
R726	1-247-777-00	CARBON	5.6	5%	1/6W						
R727	1-249-419-11	CARBON	1.5K	5%	1/6W						
R728	1-247-817-00	CARBON	270	5%	1/6W						
R729	1-247-819-00	CARBON	330	5%	1/6W						
R730	1-206-747-00	METAL OXIDE	8.2K	5%	3W	F					
R732	1-247-813-00	CARBON	180	5%	1/6W						
R733	1-247-839-00	CARBON	2.2K	5%	1/6W						
R734	1-249-422-11	CARBON	2.7K	5%	1/6W						
R735	1-247-781-00	CARBON	8.2	5%	1/6W						
R737	1-206-747-00	METAL OXIDE	8.2K	5%	3W	F					
<u>CAPACITOR</u>											
				C501	1-106-359-00	MYLAR	0.0047MF	10%	100V		
				C503	1-106-180-00	MYLAR	0.0022MF	10%	100V		
				C504	1-123-380-00	ELECT	1MF	20%	50V		
				C505	1-106-212-00	MYLAR	0.047MF	10%	100V		
				C507	1-123-369-00	ELECT	4.7MF	20%	25V		
				C508	1-106-192-00	MYLAR	0.0068MF	10%	100V		
				C509	1-106-220-00	MYLAR	0.1MF	10%	100V		
				C510	1-106-204-00	MYLAR	0.022MF	10%	100V		
				C511	1-123-356-00	ELECT	10MF	20%	16V		
				C512	1-123-381-00	ELECT	2.2MF	20%	50V		
				C513	1-130-868-00	FILM	0.0056MF	5%	50V		
				C514	1-123-356-00	ELECT	10MF	20%	16V		
				C515	1-123-356-00	ELECT	10MF	20%	16V		
				C516	1-102-820-00	CERAMIC	330PF	5%	50V		
				C517	1-123-330-00	ELECT	22MF	20%	16V		
				C518	1-106-180-00	MYLAR	0.0022MF	10%	100V		
				C519	1-136-173-00	FILM	0.47MF	5%	50V		
				C520	1-123-379-00	ELECT	0.47MF	20%	50V		
				C521	1-106-212-00	MYLAR	0.047MF	10%	100V		
				C522	1-106-196-00	MYLAR	0.01MF	10%	100V		
				C523	1-123-380-00	ELECT	1MF	20%	50V		
				C524	1-106-204-00	MYLAR	0.022MF	10%	100V		
				C525	1-106-196-00	MYLAR	0.01MF	10%	100V		
				C526	1-123-323-00	ELECT	470MF	20%	16V		
				C527	1-106-176-00	MYLAR	0.0015MF	10%	100V		
				C528	1-106-204-00	MYLAR	0.022MF	10%	100V		
				C529	1-102-030-00	CERAMIC	330PF	10%	500V		
				C530	1-123-357-00	ELECT	22MF	20%	50V		
				C532	1-123-232-00	ELECT	4.7MF	20%	50V		

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Ref. No.	Part No.	Description		Remark		Ref. No.	Part No.	Description		Remark	
C533	1-123-323-00	ELECT	470MF	20%	16V	C608	1-123-330-00	ELECT	22MF	20%	16V
C536	1-131-369-00	TANTALUM	4.7MF	10%	16V	C610	1-123-335-00	ELECT	330MF	20%	25V
C537	1-123-356-00	ELECT	10MF	20%	25V	C611	1-123-360-00	ELECT	100MF	20%	50V
C538	1-124-117-00	ELECT	680MF	10%	25V	C612	1-123-323-00	ELECT	470MF	20%	16V
C542	1-123-356-00	ELECT	10MF	20%	16V	C613	1-123-336-00	ELECT	470MF	20%	25V
C544	1-108-595-00	MYLAR	0.047MF	5%	50V	C614	1-101-002-00	CERAMIC	0.0022MF	50V	
C546	1-123-332-00	ELECT	47MF	20%	16V	C617	1-130-678-51	FILM	0.047MF	20%	125V
C551	1-106-204-00	MYLAR	0.022MF	10%	100V	C621	1-136-311-51	FILM	0.47MF	20%	125V
C552	1-102-030-00	CERAMIC	330PF	10%	500V	C624	1-125-457-11	ELECT(BLOCK)	560MF	20%	200V
C553	1-106-192-00	MYLAR	0.0068MF	10%	100V	C625	1-161-953-00	CERAMIC	0.0047MF	20%	400V
C554	1-123-345-00	ELECT	100MF	20%	35V	C627	1-161-953-00	CERAMIC	0.0047MF	20%	400V
C556	1-123-003-00	ELECT	1MF		250V	C628	1-161-953-00	CERAMIC	0.0047MF	20%	400V
C557	1-123-356-00	ELECT	10MF	20%	25V	C629	1-125-457-11	ELECT(BLOCK)	560MF	20%	200V
C559	1-124-192-00	ELECT	4.7MF	20%	50V			<u>CONNECTOR</u>			
C560	1-106-208-00	MYLAR	0.033MF	10%	100V	D1	*1-566-054-11	PIN, CONNECTOR	2P		
C561	1-106-172-00	MYLAR	0.001MF	10%	100V	D2	*1-566-060-11	PIN, CONNECTOR	8P		
C562	1-106-176-00	MYLAR	0.0015MF	10%	100V	D3	*1-508-766-00	4P PLUG (M)			
C563	1-123-003-00	ELECT	1MF		250V	D4	*1-566-057-11	PIN, CONNECTOR	5P		
C564	1-102-244-00	CERAMIC	220PF	10%	500V	D5	*1-566-056-11	PIN, CONNECTOR	4P		
C566	1-106-196-00	MYLAR	0.01MF	10%	100V	D6	*1-508-767-00	5P PLUG			
C567	1-102-112-00	CERAMIC	330PF	10%	50V	D8	*1-508-765-00	3P PLUG (M)			
C568	1-106-212-00	MYLAR	0.047MF	10%	100V	D9	*1-508-786-00	2P PLUG (M)			
C570	1-102-212-00	CERAMIC	820PF	10%	500V	D10	*1-508-765-00	3P PLUG (M)			
C571	1-123-349-00	ELECT	1000MF	20%	35V	D11	*1-508-766-00	4P PLUG (M)			
C572	1-102-244-00	CERAMIC	220PF	10%	500V	D15	*1-560-290-00	PLUG, CONNECTOR (2.5MM PITCH)			
C573	1-121-999-00	ELECT	10MF		160V	D16	*1-508-765-00	3P PLUG (M)			
C574	1-106-369-00	MYLAR	0.012MF	10%	200V			<u>DIODE</u>			
C575	1-123-024-00	ELECT	33MF		160V						
C576	1-108-425-00	MYLAR	0.022MF	10%	200V	D501	8-719-911-19	DIODE	1SS119		
C578	1-123-379-00	ELECT	0.47MF	20%	50V	D502	8-719-911-19	DIODE	1SS119		
C579	1-102-030-00	CERAMIC	330PF	10%	500V	D503	8-719-911-55	DIODE	U05G		
C580	1-108-689-11	MYLAR	0.0056MF	10%	200V	D504	8-719-911-19	DIODE	1SS119		
C581	1-136-309-11	FILM	0.0075MF	3%	1.4KV	D507	8-719-100-35	DIODE	R05.6E-B2		
C582	1-162-115-51	CERAMIC	330PF	10%	2KV						
C583	1-106-196-00	MYLAR	0.01MF	10%	100V	D508	8-719-190-00	DIODE	RD24E-BZ7		
C584	1-108-433-00	MYLAR	0.1MF	10%	200V	D509	8-719-100-35	DIODE	RD5.6E-B2		
C585	1-162-318-51	CERAMIC	0.001MF	10%	500V	D510	8-719-911-19	DIODE	1SS119		
C586	1-162-135-51	CERAMIC	560PF	10%	2KV	D551	8-719-911-55	DIODE	U05G		
C587	1-136-312-51	FILM	0.043MF	5%	400V	D552	8-719-911-55	DIODE	U05G		
C588	1-136-308-11	FILM	0.68MF	5%	200V	D553	8-719-911-55	DIODE	U05G		
C589	1-136-116-00	FILM	1MF	5%	200V	D554	8-719-300-65	DIODE	ES1F		
C590	1-102-074-00	CERAMIC	0.001MF	10%	50V	D557	8-719-918-77	DIODE	V19G		
C591	1-102-228-00	CERAMIC	470PF	10%	500V	D558	8-719-300-76	DIODE	RH1A		
C592	1-102-112-00	CERAMIC	330PF	10%	50V	D560	8-719-305-15	DIODE	GH3F		
C598	1-123-332-00	ELECT	47MF	20%	16V	D561	8-719-928-08	DIODE	ERD28-08S		
C601	1-102-050-00	CERAMIC	0.01MF		500V	D605	8-719-911-55	DIODE	U05G		
C602	1-123-333-00	ELECT	100MF	20%	16V	D606	8-719-911-19	DIODE	1SS119		
C603	1-102-125-00	CERAMIC	0.0047MF	10%	50V	D607	8-719-911-55	DIODE	U05G		
C604	1-102-125-00	CERAMIC	0.0047MF	10%	50V	D609	1-8-719-521-10	DIODE	S1VB10-S		
C610	1-123-333-00	ELECT	100MF	20%	25V	D610	8-719-102-71	DIODE	RD5.6E-N2		
C605	1-123-360-00	ELECT	100MF	20%	50V	D621	8-719-200-02	DIODE	10E2		
C606	1-123-356-00	ELECT	10MF	20%	16V	D622	8-719-911-55	DIODE	U05G		
C607	1-123-356-00	ELECT	10MF	20%	16V	D623	8-719-911-55	DIODE	U05G		

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Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
		<u>FUSE</u>		R511	1-247-868-00	CARBON	36K 5% 1/6W
F601	▲.1-532-509-11	FUSE, GLASS TUBE 6.3A/125V		R512	1-247-819-00	CARBON	330 5% 1/6W
	1-517-072-00	LAMP HOLDER; F601		R513	1-249-468-11	CARBON	82K 5% 1/4W
F602	▲.1-532-536-11	FUSE, GLASS-TUBE 1A/125V		R514	1-247-719-11	CARBON	3.3K 5% 1/4W
	1-533-087-00	HOLDER, FUSE; F602		R515	1-249-459-11	CARBON	12K 5% 1/4W
		<u>IC</u>		R516	1-249-435-11	CARBON	33K 5% 1/6W
IC501	8-759-100-60	IC UPC1377C		R517	1-247-811-00	CARBON	150 5% 1/6W
IC551	8-759-105-82	IC UPC1378H-P		R518	1-247-711-11	CARBON	680 5% 1/4W F
	3-701-833-01	HEAD, WASHER, TAPPING SCREW; IC551		R519	1-247-849-00	CARBON	5.6K 5% 1/6W
IC552	8-759-145-58	IC UPC4558C		R520	1-249-419-11	CARBON	1.5K 5% 1/6W
		<u>COIL</u>		R521	1-249-417-11	CARBON	1K 5% 1/6W
L551	1-459-570-11	HLC		R522	1-247-873-00	CARBON	56K 5% 1/6W
L552	▲.1-459-390-11	COIL (WITH CORE)		R523	1-247-856-00	CARBON	11K 5% 1/6W
L553	1-459-104-00	COIL, DUST CORE		R524	1-249-459-11	CARBON	12K 5% 1/4W
L555	1-407-699-00	MICRO INDUCTOR 33UH		R525	1-247-873-00	CARBON	56K 5% 1/6W
L556	1-407-699-00	MICRO INDUCTOR 33UH		R526	1-247-717-11	CARBON	2.2K 5% 1/4W
L557	1-459-407-11	COIL, FERRITE CHOKE		R527	1-247-821-00	CARBON	390 5% 1/6W
L558	1-407-365-00	COIL, CHOKE		R528	1-247-845-00	CARBON	3.9K 5% 1/6W
L559	1-407-364-00	COIL, SPOOK CHOKE 3.3UH		R529	1-214-746-00	METAL	5.1K 1% 1/4W
L560	1-407-695-00	MICRO INDUCTOR 15UH		R530	1-214-753-00	METAL	10K 1% 1/4W
L562	1-408-239-00	MICRO INDUCTOR 4.7MMH		R531	▲.1-247-725-11	CARBON	10K 5% 1/4W
L563	1-459-075-00	COIL, DYNAMIC CONVERSION CHOKE		R532	1-247-725-11	CARBON	10K 5% 1/4W
		<u>NEON LAMP</u>		R533	1-206-692-00	METAL OXIDE	15K 5% 2W F
NL551	1-519-237-11	LAMP, NEON		R534	1-214-747-00	METAL	5.6K 1% 1/4W
		<u>TRANSISTOR</u>		R535	1-247-851-00	CARBON	6.8K 5% 1/6W
Q501	8-729-178-55	TRANSISTOR 2SC2785-E		R536	1-247-853-00	CARBON	8.2K 5% 1/6W
Q503	8-729-309-06	TRANSISTOR 2SC1890A-EV		R537	1-249-429-11	CARBON	10K 5% 1/6W
Q504	8-729-178-55	TRANSISTOR 2SC2785-E		R538	1-212-361-00	METAL OXIDE	1.2 5% 1W F
Q505	8-729-178-55	TRANSISTOR 2SC2785-E		R539	1-247-823-00	CARBON	470 5% 1/6W
Q510	8-729-117-54	TRANSISTOR 2SA1175		R542	1-214-779-00	METAL	120K 1% 1/4W
Q551	8-729-168-82	TRANSISTOR 2SC2688		R543	1-247-903-00	CARBON	1M 5% 1/6W
Q552	8-729-203-80	TRANSISTOR 2SD1555-LB-S1		R544	1-214-781-00	METAL	150K 1% 1/4W
Q553	8-729-313-42	TRANSISTOR 2SD1134		R545	1-214-766-00	METAL	36K 1% 1/4W
Q602	8-729-965-22	TRANSISTOR 2SC1652		R546	1-247-857-00	CARBON	12K 5% 1/6W
Q603	8-729-378-84	TRANSISTOR 2SD788		R547	1-247-833-00	CARBON	1.2K 5% 1/6W
		<u>RESISTOR</u>		R549	1-247-724-11	CARBON	8.2K 5% 1/4W
R500	1-249-417-11	CARBON	1K 5% 1/6W	R550	1-247-725-11	CARBON	10K 5% 1/4W
R501	1-247-725-11	CARBON	10K 5% 1/4W	R551	1-214-681-00	METAL	10 1% 1/4W
R502	1-247-725-11	CARBON	10K 5% 1/4W	R552	1-247-041-00	CARBON	1.2K 5% 1/8W F
R503	1-246-457-00	CARBON	220 5% 1/4W	R553	1-247-746-11	CARBON	390 5% 1/2W
R504	1-247-819-00	CARBON	330 5% 1/6W	R554	1-246-539-00	CARBON	560K 5% 1/4W
R505	1-247-716-11	CARBON	1.8K 5% 1/4W	R555	1-249-468-11	CARBON	82K 5% 1/4W
R506	1-246-449-25	CARBON	100 5% 1/4W	R556	1-249-437-11	CARBON	47K 5% 1/6W
R507	1-246-536-00	CARBON	430K 5% 1/4W	R557	1-247-897-00	CARBON	560K 5% 1/6W
R508	1-249-462-11	CARBON	22K 5% 1/4W	R558	1-213-135-00	METAL OXIDE	220 5% 1W F
R509	1-249-433-11	CARBON	22K 5% 1/6W	R559	1-247-719-11	CARBON	3.3K 5% 1/4W F
R510	1-249-440-11	CARBON	82K 5% 1/6W	R560	1-213-134-00	METAL OXIDE	180 5% 1W F
				R561	1-247-035-00	CARBON	220 5% 1W F
				R562	1-249-429-11	CARBON	10K 5% 1/6W
				R563	1-247-715-11	CARBON	1.5K 5% 1/4W F
				R564	1-247-719-11	CARBON	270 5% 1/8W F
				R565	1-247-041-00	CARBON	1K 5% 1/6W
				R566	1-247-823-00	CARBON	470 5% 1/4W
				R567	1-249-429-11	CARBON	1.5K 5% 1/4W F
				R568	1-247-715-11	CARBON	1.5K 5% 1/4W F
				R569	1-247-035-00	CARBON	270 5% 1/8W F
				R570	1-249-417-11	CARBON	1K 5% 1/6W
				R571	1-246-465-25	CARBON	470 5% 1/4W

The components identified by shading and mark ▲ are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque ▲ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

- The components identified by ▲ in this manual have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used.

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Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
R572	1-247-833-00	CARBON	1.2K 5%	1/6W			
R573	1-206-465-00	METAL OXIDE	12 5%	2W	F		
R574	1-247-815-00	CARBON	220 5%	1/6W			
R575	1-247-725-11	CARBON	10K 5%	1/4W			
R576	1-247-851-00	CARBON	6.8K 5%	1/6W			
R577	1-249-429-11	CARBON	10K 5%	1/6W			
R578	1-249-411-11	CARBON	330 5%	1/8W	F		
R579	1-247-719-11	CARBON	3.3K 5%	1/4W			
R580	1-247-725-11	CARBON	10K 5%	1/4W	F		
R581	1-213-140-00	METAL OXIDE	560 5%	1W	F		
R582	1-212-359-00	METAL OXIDE	0.82 5%	1W	F		
R583	1-249-433-11	CARBON	22K 5%	1/6W			
R584	1-246-511-00	CARBON	39K 5%	1/4W			
R585	1-247-719-11	CARBON	3.3K 5%	1/4W			
R586	1-247-857-00	CARBON	12K 5%	1/6W			
R587	1-246-529-00	CARBON	220K 5%	1/4W			
R588	1-249-429-11	CARBON	10K 5%	1/6W			
R589	1-249-432-11	CARBON	18K 5%	1/6W			
R590	1-247-749-11	CARBON	560 5%	1/2W	F		
R591	1-247-713-11	CARBON	1K 5%	1/4W			
R592	1-249-424-11	CARBON	3.9K 5%	1/8W			
R593	1-247-040-00	CARBON	1K 5%	1/8W	F		
R595	1-247-749-11	CARBON	560 5%	1/2W	F		
R596	1-247-829-00	CARBON	820 5%	1/6W			
R598	1-246-525-00	CARBON	150K 5%	1/4W			
R599	1-247-717-11	CARBON	2.2K 5%	1/4W			
R602	1-246-481-25	CARBON	2.2K 5%	1/4W			
R603	1-246-481-25	CARBON	2.2K 5%	1/4W			
R604	1-213-135-61	METAL OXIDE	220 5%	1W	F		
R606	1-247-713-11	CARBON	1K 5%	1/4W			
R607	1-247-717-11	CARBON	2.2K 5%	1/4W			
R608	1-247-711-11	CARBON	680 5%	1/4W			
R620	1-202-723-00	SOL ID	2.2M 10%	1/2W			
R621	1-202-723-51	SOL ID	2.2M 10%	1/2W			
R623	1-246-525-00	CARBON	150K 5%	1/4W			
R624	1-246-525-00	CARBON	150K 5%	1/4W			
<u>VARIABLE RESISTOR</u>							
RV501	1-228-723-00	RES, ADJ, CERAMIC	CARBON 4.7K				
RV503	1-228-718-00	RES, ADJ, CERAMIC	CARBON 330				
RV552	1-228-725-00	RES, ADJ, CERAMIC	CARBON 22K				
RV553	1-228-720-00	RES, ADJ, CERAMIC	CARBON 1K				
RV554	1-228-726-00	RES, ADJ, CERAMIC	CARBON 33K				
<u>RELAY</u>							
RY601	1-515-491-11	RELAY (POWER)					
<u>SWITCH</u>							
S551	1-554-186-00	SWITCH, LEVER					
<u>SPARK GAP</u>							
SG551	1-519-063-XX	DISCHARGING GAP					

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Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark					
C832	1-123-622-00	ELECT	22MF	20%	16V	Q815	8-729-178-54	TRANSISTOR 2SC2785				
C834	1-123-318-00	ELECT	33MF	20%	16V	Q816	8-729-178-54	TRANSISTOR 2SC2785				
C835	1-123-820-00	ELECT	33MF	20%	16V	Q817	8-729-178-54	TRANSISTOR 2SC2785				
C836	1-123-820-00	ELECT	33MF	20%	16V	Q818	8-729-178-54	TRANSISTOR 2SC2785				
C837	1-123-318-00	ELECT	33MF	20%	16V	Q819	8-729-178-54	TRANSISTOR 2SC2785				
C839	1-123-380-00	ELECT	1MF	20%	50V	Q820	8-729-178-54	TRANSISTOR 2SC2785				
C842	1-123-321-00	ELECT	220MF	20%	16V	Q821	8-729-178-54	TRANSISTOR 2SC2785				
C843	1-123-318-00	ELECT	33MF	20%	16V	Q822	8-729-117-54	TRANSISTOR 2SA1175				
C845	1-123-356-00	ELECT	10MF	20%	16V	Q823	8-729-117-54	TRANSISTOR 2SA1175				
C846	1-119-358-00	ELECT	22MF		16V	Q824	8-729-178-54	TRANSISTOR 2SC2785				
C847	1-102-125-00	CERAMIC	0.0047MF	10%	50V	Q825	8-729-117-54	TRANSISTOR 2SA1175				
C851	1-123-333-00	ELECT	100MF	20%	16V	Q826	8-729-178-54	TRANSISTOR 2SC2785				
C852	1-123-318-00	ELECT	33MF	20%	16V	Q827	8-729-178-54	TRANSISTOR 2SC2785				
C853	1-102-125-00	CERAMIC	0.0047MF	10%	50V	Q828	8-729-178-54	TRANSISTOR 2SC2785				
C880	1-123-307-00	ELECT	100MF	20%	6.3V	Q829	8-729-117-54	TRANSISTOR 2SA1175				
<u>DIODE</u>												
D801	8-719-102-74	DIODE RD6.2E-N2			Q830	8-729-117-54	TRANSISTOR 2SA1175					
D802	8-719-102-74	DIODE RD6.2E-N2			Q831	8-729-117-54	TRANSISTOR 2SA1175					
D803	8-719-102-74	DIODE RD6.2E-N2			Q832	8-729-117-54	TRANSISTOR 2SA1175					
D806	8-719-102-74	DIODE RD6.2E-N2			Q833	8-729-178-54	TRANSISTOR 2SC2785					
D807	8-719-911-19	DIODE 1SS119			Q834	8-729-178-54	TRANSISTOR 2SC2785					
D808	8-719-911-19	DIODE 1SS119			Q835	8-729-178-54	TRANSISTOR 2SC2785					
D809	8-719-911-19	DIODE 1SS119			<u>RESISTOR</u>							
D814	8-719-815-55	DIODE 1S1555			R801	1-247-708-11	CARBON	470	5%	1/4W		
D815	8-719-815-55	DIODE 1S1555			R802	1-247-873-00	CARBON	56K	5%	1/6W		
D816	8-719-911-19	DIODE 1SS119			R803	1-247-873-00	CARBON	56K	5%	1/6W		
D817	8-719-911-19	DIODE 1SS119			R804	1-246-457-00	CARBON	220	5%	1/4W		
D818	8-719-102-74	DIODE RD6.2E-N2			R805	1-249-441-11	CARBON	100K	5%	1/6W		
<u>IC</u>												
IC801	8-759-240-52	IC UPD4052BP			R806	1-247-873-00	CARBON	56K	5%	1/6W		
IC802	8-759-240-52	IC UPD4052BP			R807	1-247-873-00	CARBON	56K	5%	1/6W		
IC803	8-759-900-09	IC SN74LS09N			R808	1-249-469-11	CARBON	100K	5%	1/4W		
IC804	8-759-140-53	IC UPD4053BC			R809	1-246-543-00	CARBON	820K	5%	1/4W		
IC805	8-759-240-52	IC UPD4052BP			R810	1-249-417-11	CARBON	1K	5%	1/6W		
IC806	8-759-900-05	IC SN74LS05N			R811	1-246-457-00	CARBON	220	5%	1/4W		
IC807	8-759-145-58	IC UPC4558C			R812	1-249-425-11	CARBON	4.7K	5%	1/6W		
<u>COIL</u>												
I801	1-408-235-00	MICRO INDUCTOR 2.2MMH			R813	1-247-869-00	CARBON	39K	5%	1/6W		
I802	1-408-417-00	MICRO INDUCTOR 47UH			R814	1-249-425-11	CARBON	4.7K	5%	1/6W		
<u>TRANSISTOR</u>												
Q802	8-729-117-54	TRANSISTOR 2SA1175			R815	1-249-429-11	CARBON	10K	5%	1/6W		
Q803	8-729-117-54	TRANSISTOR 2SA1175			R816	1-249-429-11	CARBON	10K	5%	1/4W		
Q804	8-729-117-54	TRANSISTOR 2SA1175			R817	1-247-708-11	CARBON	470	5%	1/4W		
Q805	8-729-178-54	TRANSISTOR 2SC2785			R818	1-247-713-11	CARBON	1K	5%	1/4W		
Q806	8-729-178-54	TRANSISTOR 2SC2785			R819	1-247-713-11	CARBON	1K	5%	1/4W		
Q807	8-729-178-54	TRANSISTOR 2SC2785			R820	1-215-491-00	CARBON	820K	5%	1/6W		
Q812	8-729-117-54	TRANSISTOR 2SA1175			R821	1-247-869-00	CARBON	39K	5%	1/6W		
Q813	8-729-178-54	TRANSISTOR 2SC2785			R822	1-246-457-00	CARBON	220	5%	1/4W		
Q814	8-729-178-54	TRANSISTOR 2SC2785			R823	1-246-449-25	CARBON	100	5%	1/4W		
Q815	8-729-178-54	TRANSISTOR 2SC2785			R824	1-247-705-11	CARBON	270	5%	1/4W		
Q816	8-729-178-54	TRANSISTOR 2SC2785			R825	1-247-815-00	CARBON	220	5%	1/6W		
Q817	8-729-178-54	TRANSISTOR 2SC2785			R827	1-247-893-00	CARBON	390K	5%	1/6W		
Q818	8-729-178-54	TRANSISTOR 2SC2785			R828	1-247-893-00	CARBON	390K	5%	1/6W		
Q819	8-729-178-54	TRANSISTOR 2SC2785			R829	1-246-507-00	CARBON	27K	5%	1/4W		
Q820	8-729-178-54	TRANSISTOR 2SC2785			R830	1-246-507-00	CARBON	27K	5%	1/4W		
Q821	8-729-178-54	TRANSISTOR 2SC2785			R831	1-246-507-00	CARBON	27K	5%	1/4W		

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Ref.No.	Part No.	Description			Remark	Ref.No.	Part No.	Description			Remark
R832	1-246-507-00	CARBON	27K	5%	1/4W	R891	1-246-445-00	CARBON	68	5%	1/4W
R833	1-246-507-00	CARBON	27K	5%	1/4W	R892	1-246-449-25	CARBON	100	5%	1/4W
R834	1-249-434-11	CARBON	27K	5%	1/6W	R893	1-246-457-00	CARBON	220	5%	1/4W
R835	1-247-893-00	CARBON	390K	5%	1/6W	R894	1-246-465-25	CARBON	470	5%	1/4W
R837	1-247-712-11	CARBON	820	5%	1/4W	R895	1-247-725-11	CARBON	10K	5%	1/4W
R838	1-247-895-00	CARBON	470K	5%	1/6W	R896	1-247-725-11	CARBON	10K	5%	1/4W
R839	1-246-537-00	CARBON	470K	5%	1/4W	R897	1-249-429-11	CARBON	10K	5%	1/6W
R840	1-247-104-00	CARBON	75	5%	1/4W	R898	1-249-429-11	CARBON	10K	5%	1/6W
R841	1-247-722-11	CARBON	5.6K	5%	1/4W	R899	1-246-457-00	CARBON	220	5%	1/4W
R842	1-247-722-11	CARBON	5.6K	5%	1/4W	R900	1-246-449-25	CARBON	100	5%	1/4W
R843	1-247-725-11	CARBON	10K	5%	1/4W	R901	1-247-713-11	CARBON	1K	5%	1/4W
R844	1-247-725-11	CARBON	10K	5%	1/4W	R902	1-247-713-11	CARBON	1K	5%	1/4W
R845	1-247-895-00	CARBON	470K	5%	1/6W	R903	1-247-699-11	CARBON	82	5%	1/4W
R846	1-247-104-00	CARBON	75	5%	1/4W	R904	1-247-699-11	CARBON	82	5%	1/4W
R847	1-246-507-00	CARBON	27K	5%	1/4W	R905	1-247-699-11	CARBON	82	5%	1/4W
R848	1-246-507-00	CARBON	27K	5%	1/4W	R906	1-246-457-00	CARBON	220	5%	1/4W
R849	1-247-713-11	CARBON	1K	5%	1/4W	R908	1-249-432-11	CARBON	18K	5%	1/6W
R850	1-247-713-11	CARBON	1K	5%	1/4W	R909	1-249-435-11	CARBON	33K	5%	1/6W
R851	1-247-725-11	CARBON	10K	5%	1/4W	R910	1-249-432-11	CARBON	18K	5%	1/6W
R852	1-249-433-11	CARBON	22K	5%	1/6W	R911	1-249-441-11	CARBON	100K	5%	1/6W
R853	1-247-707-11	CARBON	390	5%	1/4W	R912	1-249-441-11	CARBON	100K	5%	1/6W
R854	1-247-104-00	CARBON	75	5%	1/4W	R913	1-249-425-11	CARBON	4.7K	5%	1/6W
R855	1-247-721-11	CARBON	4.7K	5%	1/4W	R914	1-249-425-11	CARBON	4.7K	5%	1/6W
R856	1-247-713-11	CARBON	1K	5%	1/4W	R915	1-247-823-00	CARBON	470	5%	1/6W
R857	1-249-461-11	CARBON	18K	5%	1/4W	R916	1-247-823-00	CARBON	470	5%	1/6W
R858	1-249-440-11	CARBON	82K	5%	1/6W	R917	1-249-415-11	CARBON	680	5%	1/6W
R859	1-249-417-11	CARBON	1K	5%	1/6W	R918	1-249-419-11	CARBON	1.5K	5%	1/6W
R860	1-246-457-00	CARBON	220	5%	1/4W	R919	1-249-429-11	CARBON	10K	5%	1/6W
R861	1-247-721-11	CARBON	4.7K	5%	1/4W	R921	1-249-417-11	CARBON	1K	5%	1/6W
R862	1-249-417-11	CARBON	1K	5%	1/6W	R922	1-247-713-11	CARBON	1K	5%	1/4W
R863	1-249-419-11	CARBON	1.5K	5%	1/6W	R923	1-249-437-11	CARBON	47K	5%	1/6W
R864	1-246-457-00	CARBON	220	5%	1/4W	R924	1-249-437-11	CARBON	47K	5%	1/6W
R865	1-246-457-00	CARBON	220	5%	1/4W	R925	1-247-893-00	CARBON	390K	5%	1/6W
R866	1-249-419-11	CARBON	1.5K	5%	1/6W	R926	1-249-429-11	CARBON	10K	5%	1/6W
R867	1-249-419-11	CARBON	1.5K	5%	1/6W	R928	1-249-417-11	CARBON	1K	5%	1/6W
R868	1-249-417-11	CARBON	1K	5%	1/6W	R929	1-247-713-11	CARBON	1K	5%	1/4W
R869	1-246-457-00	CARBON	220	5%	1/4W	R930	1-247-713-11	CARBON	1K	5%	1/4W
R870	1-246-457-00	CARBON	220	5%	1/4W	R931	1-247-713-11	CARBON	1K	5%	1/4W
R872	1-246-457-00	CARBON	220	5%	1/4W	R932	1-249-441-11	CARBON	100K	5%	1/6W
R873	1-246-457-00	CARBON	220	5%	1/4W	R934	1-249-441-11	CARBON	100K	5%	1/6W
R874	1-247-823-00	CARBON	470	5%	1/6W	R938	1-247-719-11	CARBON	3.3K	5%	1/4W
R875	1-249-459-11	CARBON	12K	5%	1/4W	R939	1-249-420-11	CARBON	1.8K	5%	1/6W
R876	1-247-829-00	CARBON	820	5%	1/6W	R940	1-249-441-11	CARBON	100K	5%	1/6W
R879	1-247-823-00	CARBON	470	5%	1/6W	R941	1-247-713-11	CARBON	1K	5%	1/4W
R881	1-247-887-00	CARBON	220K	5%	1/6W	R942	1-247-104-00	CARBON	75	5%	1/4W
R882	1-247-887-00	CARBON	220K	5%	1/6W	R943	1-247-104-00	CARBON	75	5%	1/4W
R883	1-249-429-11	CARBON	10K	5%	1/6W	R944	1-247-104-00	CARBON	75	5%	1/4W
R884	1-249-429-11	CARBON	10K	5%	1/6W	R947	1-247-713-11	CARBON	1K	5%	1/4W
R885	1-249-433-11	CARBON	22K	5%	1/6W	R949	1-247-713-11	CARBON	1K	5%	1/4W
R886	1-249-462-11	CARBON	22K	5%	1/4W	R950	1-247-713-11	CARBON	1K	5%	1/4W
R887	1-249-433-11	CARBON	22K	5%	1/6W	R951	1-247-707-11	CARBON	390	5%	1/4W
R888	1-249-433-11	CARBON	22K	5%	1/6W	R952	1-247-707-11	CARBON	390	5%	1/4W
R889	1-249-417-11	CARBON	1K	5%	1/6W	R955	1-246-535-00	CARBON	390K	5%	1/4W

U X

Ref.No.	Part No.	Description			Remark	Ref.No.	Part No.	Description			Remark
R956	1-247-719-11	CARBON	3.3K	5%	1/4W	C1121	1-102-112-00	CERAMIC	330PF	10%	50V
R957	1-247-815-00	CARBON	220	5%	1/6W	C1122	1-123-369-00	ELECT	4.7MF	20%	25V
R958	1-247-719-11	CARBON	3.3K	5%	1/4W	C1123	1-123-380-00	ELECT	1MF	20%	50V
R959	1-247-815-00	CARBON	220	5%	1/6W	C1124	1-123-380-00	ELECT	1MF	20%	50V
<u>VARIABLE RESISTOR</u>						C1125	1-123-332-00	ELECT	47MF	20%	16V
RV801	1-228-848-00	RES, VAR, CARBON 10K				C1126	1-123-380-00	ELECT	1MF	20%	50V
RV802	1-228-490-00	RES, VAR, CARBON 10K				C1127	1-123-356-00	ELECT	10MF	20%	16V
<u>SWITCH</u>						C1128	1-106-176-00	MYLAR	0.0015MF	10%	100V
S801	1-553-651-00	SWITCH, S-LIDE				C1129	1-106-176-00	MYLAR	0.0015MF	10%	100V
S802	1-553-651-00	SWITCH, S-LIDE				C1130	1-123-380-00	ELECT	1MF	20%	50V
<u>CONNECTOR</u>						C1131	1-131-345-00	TANTALUM	0.47MF	10%	35V
U1	*1-566-059-11	PIN, CONNECTOR 7P				C1132	1-123-356-00	ELECT	10MF	20%	16V
U2	*1-566-060-11	PIN, CONNECTOR 8P				C1133	1-123-318-00	ELECT	33MF	20%	16V
U3	*1-566-043-11	PIN, CONNECTOR 4P				C1134	1-130-301-00	FILM	0.015MF	5%	100V
U4	*1-566-056-11	PIN, CONNECTOR 4P				C1135	1-123-323-00	ELECT	470MF	20%	16V
U5	*1-566-056-11	PIN, CONNECTOR 4P				C1136	1-123-332-00	ELECT	47MF	20%	16V
U6	*1-566-057-11	PIN, CONNECTOR 5P				C1137	1-123-332-00	ELECT	47MF	20%	16V
U7	*1-566-058-11	PIN, CONNECTOR 6P				C1148	1-123-308-00	ELECT	220MF	20%	10V
U8	*1-566-058-11	PIN, CONNECTOR 6P				C1149	1-123-381-00	ELECT	2.2MF	20%	50V
U9	*1-566-044-11	PIN, CONNECTOR 5P				C1150	1-123-381-00	ELECT	2.2MF	20%	50V
U10	*1-566-054-11	PIN, CONNECTOR 2P				C1151	1-123-369-00	ELECT	4.7MF	20%	25V
U11	*1-566-044-11	PIN, CONNECTOR 5P				C1152	1-123-369-00	ELECT	4.7MF	20%	25V
U13	*1-566-054-11	PIN, CONNECTOR 2P				C1153	1-102-074-00	CERAMIC	0.001MF	10%	50V
*****						C1154	1-102-074-00	CERAMIC	0.001MF	10%	50V
*****						C1155	1-102-074-00	CERAMIC	0.001MF	10%	50V
*****						C1156	1-102-074-00	CERAMIC	0.001MF	10%	50V
*****						C1157	1-123-323-00	ELECT	470MF	20%	16V
*****						C1160	1-106-212-00	MYLAR	0.047MF	10%	100V
*****						C1161	1-106-172-00	MYLAR	0.001MF	10%	100V
*****						C1162	1-106-172-00	MYLAR	0.001MF	10%	100V
<u>CAPACITOR</u>						C1163	1-106-212-00	MYLAR	0.047MF	10%	100V
C1101	1-123-318-00	ELECT	33MF	20%	16V	C1164	1-123-356-00	ELECT	10MF	20%	16V
C1102	1-123-356-00	ELECT	10MF	20%	16V	C1165	1-123-380-00	ELECT	1MF	20%	50V
C1103	1-123-318-00	ELECT	33MF	20%	16V	C1166	1-102-824-00	CERAMIC	470PF	5%	50V
C1104	1-123-356-00	ELECT	10MF	20%	16V	C1167	1-123-380-00	ELECT	1MF	20%	50V
C1105	1-102-074-00	CERAMIC	0.001MF	10%	50V	C1168	1-102-824-00	CERAMIC	470PF	5%	50V
C1106	1-123-356-00	ELECT	10MF	20%	16V	C1169	1-123-356-00	ELECT	10MF	20%	16V
C1107	1-123-356-00	ELECT	10MF	20%	16V	C1170	1-123-345-00	ELECT	100MF	20%	35V
C1108	1-102-074-00	CERAMIC	0.001MF	10%	50V	C1171	1-123-350-00	ELECT	2200MF	20%	35V
C1109	1-106-196-00	MYLAR	0.01MF	10%	100V	C1172	1-123-346-00	ELECT	220MF	20%	35V
C1110	1-123-380-00	ELECT	1MF	20%	50V	C1174	1-106-208-00	MYLAR	0.033MF	10%	100V
C1111	1-106-212-00	MYLAR	0.047MF	10%	100V	C1175	1-123-349-00	ELECT	1000MF	20%	35V
C1112	1-106-196-00	MYLAR	0.01MF	10%	100V	C1176	1-123-359-00	ELECT	47MF	20%	35V
C1113	1-123-382-00	ELECT	3.3MF	20%	50V	C1177	1-106-212-00	MYLAR	0.047MF	10%	100V
C1114	1-123-380-00	ELECT	1MF	20%	50V	C1178	1-106-212-00	MYLAR	0.047MF	10%	100V
C1115	1-130-275-00	FILM	0.0012MF	5%	100V	C1179	1-123-359-00	ELECT	47MF	20%	35V
C1116	1-123-380-00	ELECT	1MF	20%	50V	C1180	1-123-349-00	ELECT	1000MF	20%	35V
C1117	1-123-380-00	ELECT	1MF	20%	50V	C1181	1-106-208-00	MYLAR	0.033MF	10%	100V
C1118	1-123-321-00	ELECT	220MF	20%	16V	C1182	1-123-346-00	ELECT	220MF	20%	35V
C1119	1-106-172-00	MYLAR	0.001MF	10%	100V	C1183	1-123-346-00	ELECT	10MF	20%	16V
C1120	1-106-188-00	MYLAR	0.0047MF	10%	100V	C1184	1-123-356-00	ELECT	10MF	20%	16V
						C1185	1-123-380-00	ELECT	1MF	20%	50V
						C1186	1-123-380-00	ELECT	1MF	20%	50V
						C1187	1-123-380-00	ELECT	1MF	20%	50V





Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
R1132	1-249-415-11	CARBON	680 5% 1/6W	R1188	1-249-429-11	CARBON	10K 5% 1/6W
R1133	1-249-429-11	CARBON	10K 5% 1/6W	R1189	1-249-429-11	CARBON	10K 5% 1/6W
R1134	1-249-429-11	CARBON	10K 5% 1/6W	R1190	1-247-811-00	CARBON	150 5% 1/6W
R1135	1-249-423-11	CARBON	3.3K 5% 1/6W	R1191	1-247-823-00	CARBON	470 5% 1/6W
R1136	1-247-803-00	CARBON	68 5% 1/6W	R1192	1-249-429-11	CARBON	10K 5% 1/6W
R1137	1-249-419-11	CARBON	1.5K 5% 1/6W	R1193	1-249-429-11	CARBON	10K 5% 1/6W
R1138	1-247-819-00	CARBON	330 5% 1/6W	R1194	1-249-429-11	CARBON	10K 5% 1/6W
R1139	1-249-432-11	CARBON	18K 5% 1/6W	R1195	1-249-441-11	CARBON	100K 5% 1/6W
R1140	1-247-851-00	CARBON	6.8K 5% 1/6W	R1196	1-249-441-11	CARBON	100K 5% 1/6W
R1141	1-249-437-11	CARBON	47K 5% 1/6W	R1197	1-249-429-11	CARBON	10K 5% 1/6W
R1142	1-249-437-11	CARBON	47K 5% 1/6W	R1199	1-249-441-11	CARBON	100K 5% 1/6W
R1143	1-249-437-11	CARBON	47K 5% 1/6W	R1200	1-249-441-11	CARBON	100K 5% 1/6W
R1144	1-249-423-11	CARBON	3.3K 5% 1/6W	R1203	1-249-417-11	CARBON	1K 5% 1/6W
R1145	1-247-719-11	CARBON	3.3K 5% 1/4W	R1204	1-249-417-11	CARBON	1K 5% 1/6W
R1146	1-247-851-00	CARBON	6.8K 5% 1/6W	R1205	1-249-417-11	CARBON	1K 5% 1/6W
R1147	1-249-432-11	CARBON	18K 5% 1/6W	R1206	1-249-417-11	CARBON	1K 5% 1/6W
R1148	1-249-425-11	CARBON	4.7K 5% 1/6W	R1207	1-249-417-11	CARBON	1K 5% 1/6W
R1149	1-249-433-11	CARBON	22K 5% 1/6W	R1208	1-249-434-11	CARBON	27K 5% 1/6W
R1150	1-215-486-00	METAL	510K 1% 1/6W	R1210	1-249-425-11	CARBON	4.7K 5% 1/6W
R1151	1-214-785-00	METAL	220K 1% 1/4W	R1211	1-249-441-11	CARBON	100K 5% 1/6W
R1152	1-215-469-00	METAL	100K 1% 1/6W	R1212	1-249-425-11	CARBON	4.7K 5% 1/6W
R1153	1-214-777-00	METAL	100K 1% 1/4W	R1213	1-249-417-11	CARBON	1K 5% 1/6W
R1154	1-214-785-00	METAL	220K 1% 1/4W	R1214	1-249-441-11	CARBON	100K 5% 1/6W
R1155	1-215-493-00	METAL	1M 1% 1/6W	R1215	1-247-881-00	CARBON	120K 5% 1/6W
R1156	1-215-493-00	METAL	1M 1% 1/6W	R1216	1-247-893-00	CARBON	390K 5% 1/6W
R1157	1-246-529-00	CARBON	220K 5% 1/4W	R1217	1-211-427-00	CARBON	100 5% 1/8W F
R1158	1-249-441-11	CARBON	100K 5% 1/6W	R1218	1-249-415-11	CARBON	680 5% 1/6W
R1159	1-247-886-00	CARBON	200K 5% 1/6W	R1220	1-247-859-00	CARBON	15K 5% 1/6W
R1160	1-246-457-00	CARBON	220 5% 1/4W	R1221	1-249-432-11	CARBON	18K 5% 1/6W
R1161	1-249-433-11	CARBON	22K 5% 1/6W	R1222	1-211-401-00	CARBON	4.7 5% 1/8W F
R1162	1-249-425-11	CARBON	4.7K 5% 1/6W	R1223	1-211-401-00	CARBON	4.7 5% 1/8W F
R1163	1-247-851-00	CARBON	6.8K 5% 1/6W	R1224	1-249-417-11	CARBON	1K 5% 1/6W
R1164	1-249-432-11	CARBON	18K 5% 1/6W	R1225	1-249-461-11	CARBON	18K 5% 1/4W
R1165	1-247-848-00	CARBON	5.1K 5% 1/6W	R1226	1-247-859-00	CARBON	15K 5% 1/6W
R1166	1-249-419-11	CARBON	1.5K 5% 1/6W	R1227	1-249-417-11	CARBON	1K 5% 1/6W
R1167	1-247-833-00	CARBON	1.2K 5% 1/6W	R1229	1-249-415-11	CARBON	680 5% 1/6W
R1168	1-249-425-11	CARBON	4.7K 5% 1/6W	R1230	1-249-441-11	CARBON	100K 5% 1/6W
R1170	1-247-849-00	CARBON	5.6K 5% 1/6W	R1231	1-249-417-11	CARBON	1K 5% 1/6W
R1171	1-249-390-11	CARBON	5.6 5% 1/8W F	R1232	1-249-417-11	CARBON	1K 5% 1/6W
R1172	1-247-823-00	CARBON	470 5% 1/6W	R1233	1-249-417-11	CARBON	1K 5% 1/6W
R1173	1-249-422-11	CARBON	2.7K 5% 1/6W	R1234	1-249-417-11	CARBON	1K 5% 1/6W
R1174	1-247-829-00	CARBON	820 5% 1/6W	R1237	1-249-441-11	CARBON	100K 5% 1/6W
R1175	1-249-421-11	CARBON	2.2K 5% 1/6W	R1241	1-249-429-11	CARBON	10K 5% 1/6W
R1176	1-247-815-00	CARBON	220 5% 1/6W	R1243	1-247-862-00	CARBON	20K 5% 1/6W
R1177	1-249-433-11	CARBON	22K 5% 1/6W	R1245	1-249-435-11	CARBON	33K 5% 1/6W
R1180	1-249-429-11	CARBON	10K 5% 1/6W	R1246	1-249-423-11	CARBON	3.3K 5% 1/6W
R1181	1-249-425-11	CARBON	4.7K 5% 1/6W	R1247	1-247-885-00	CARBON	180K 5% 1/6W
R1182	1-247-838-00	CARBON	2K 5% 1/6W	R1248	1-247-885-00	CARBON	180K 5% 1/6W
R1183	1-247-838-00	CARBON	2K 5% 1/6W	R1249	1-249-425-11	CARBON	4.7K 5% 1/6W
R1184	1-247-829-00	CARBON	820 5% 1/6W	R1250	1-249-425-11	CARBON	4.7K 5% 1/6W
R1185	1-247-829-00	CARBON	820 5% 1/6W	R1251	1-249-433-11	CARBON	22K 5% 1/6W
R1186	1-247-838-00	CARBON	2K 5% 1/6W	R1252	1-249-423-11	CARBON	3.3K 5% 1/6W
R1187	1-249-441-11	CARBON	100K 5% 1/6W	R1253	1-249-434-11	CARBON	27K 5% 1/6W

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<u>Ref.No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>
<u>DIODE</u>			
D1501	8-719-300-65	DIODE ES1F	
<u>RESISTOR</u>			
R1501	1-213-157-00	METAL OXIDE	15K 5% 1W F
R1502	1-202-838-00	SOLID	100K 1/2W
R1503	1-202-848-00	SOLID	680K 1/2W
<u>VARIABLE RESISTOR</u>			
RV1501	A-1-226-114-11	RES, ADJ, METAL GLAZE	2.2M
<u>CONNECTOR</u>			
V1	*1-508-765-00	3P PLUG (M)	

<u>MISCELLANEOUS</u>			

A-1-417-125-11	SELECTOR, ANTENNA		
A-1-451-256-12	DEFLECTION YOKE (SY-153)		
1-452-032-00	MAGNET, DISK; 10MM Ø		
1-452-094-00	MAGNET, ROTATABLE DISK; 15MM Ø		
1-452-277-00	MAGNET, BMC		
*1-557-009-00	CABLE, P-P		
A-1-557-269-11	CORD, POWER		
L906	A-1-426-224-12	COIL, DEMAGNETIZATION	
R622	A-1-217-627-11	RES, CEMENT WIREWOUND 1.2 5% 15W	
RV901	A-1-230-786-12	RESISTER ASSY, HIGH-VOLTAGE	
T503	A-1-439-351-12	TRANSFORMER ASSY, FLYBACK	
V901	A-8-736-952-05	CRT (A51JKQ10X)	

<u>ACCESSORIES AND PACKING MATERIALS</u>			

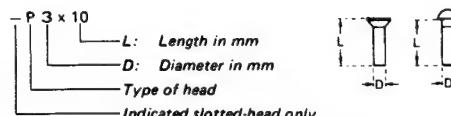
<u>Part.No.</u>	<u>Description</u>	<u>Remark</u>	
A-1470-681-A	COMMANDER ASSY (RM-724)		
1-513-379-00	CONVERTER (EAC-25)		
*4-374-242-01	CUSHION (UPPER) (ASSY)		
*4-374-243-01	CUSHION (LOWER) (ASSY)		
*4-374-248-01	SPACER		
*4-374-253-01	SUPPORT		
4-374-320-01	LABEL, INSTRUCTION, PRESET		
*4-377-015-01	BAG, PROTECTION		
*4-383-718-01	INDIVIDUAL CARTON		
4-482-354-31	MANUAL, INSTRUCTION		

The components identified by shading and mark  are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

HARDWARE NOMENCLATURE

Screw:



Nut, Washer, Retaining ring:



Reference Designation	Shape	Description	Remarks
SCREWS			
P		pan-head screw	binding-head (B) screw for replacement
PWH		pan-head screw with washer face	binding-head (B) screw and flat washer for replacement
PS PSP		pan-head screw with spring washer	binding-head (B) screw and spring washer for replacement
PSW PSPW		pan-head screw with spring and flat washers	binding-head (B) screw and spring and flat washers for replacement
R		round-head screw	binding-head (B) screw for replacement
K		flat-countersunk-head screw	
RK		oval-countersunk-head screw	
B		binding-head screw	
T		truss-head screw	binding-head (B) screw for replacement
F		flat-fillister-head screw	
RF		fillister-head screw	
BV		brazier-head screw	

Reference Designation	Shape	Description	Remarks
SELF-TAPPING SCREWS			
TA		self-tapping screw	ex: TA, P 3 x 10
PTP		pan-head self-tapping screw	binding-head self-tapping (TA, B) screw for replacement
PTPWH		pan-head self-tapping screw with washer face	binding-head self-tapping (TA, B) screw and flat washer for replacement
PTTWH		pan-head thread-rolling screw with washer face	binding-head (B) screw and flat washer for replacement
SET SCREWS			
SC		set screw	
SC		hexagon-socket set screw	ex: SC 2.6 x 4, hexagon socket
NUT			
N		nut	
WASHERS			
W		flat washer	
SW		spring washer	
LW		internal-tooth lock washer	ex: LW3, internal
LW		external-tooth lock washer	ex: LW3, external
RETAINING RINGS			
E		retaining ring	
G		grip-type retaining ring	

KV-20XBR II

RM-724/APM-X4

SONY® SERVICE MANUAL

Canadian Model

Chassis No. SCC-607D-A

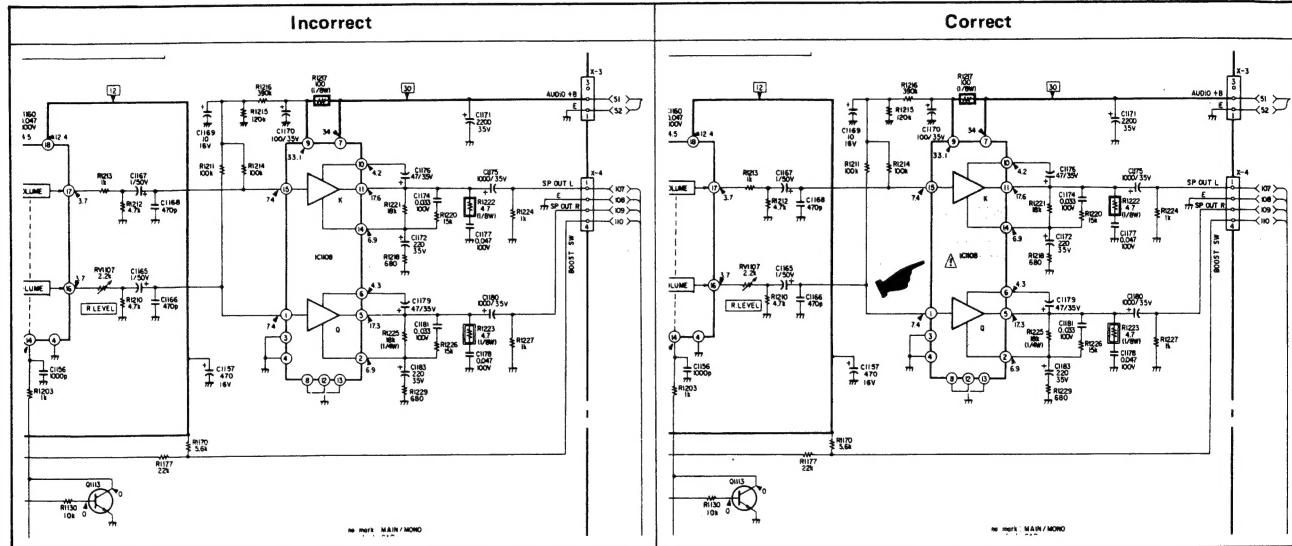
No. 1

CORRECTION

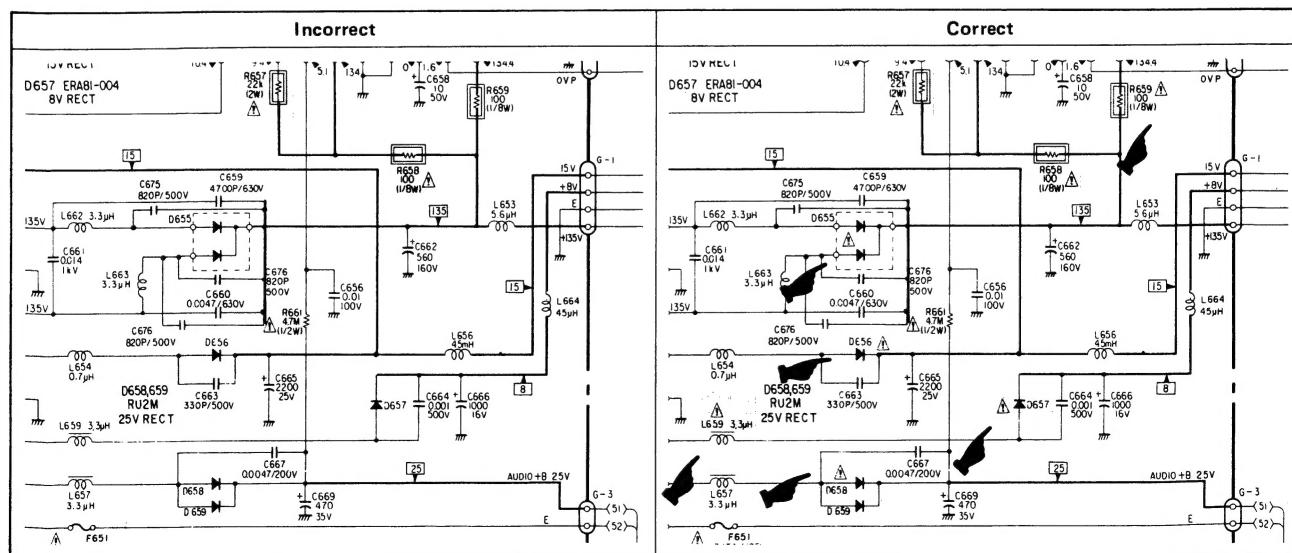
Correct the service manual as shown below.
File this correction with the service manual.

 : Corrected Portion

5-3. SCHEMATIC DIAGRAMS : P43 (X Board)



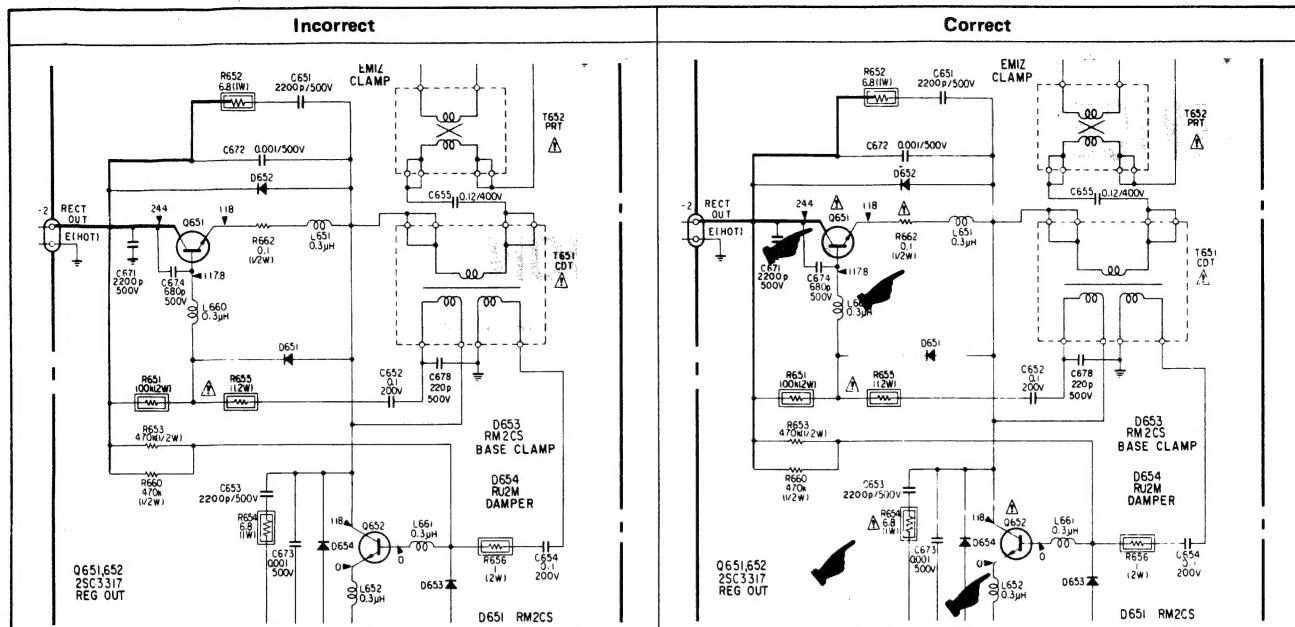
5-3. SCHEMATIC DIAGRAMS : P49 (GB Board)



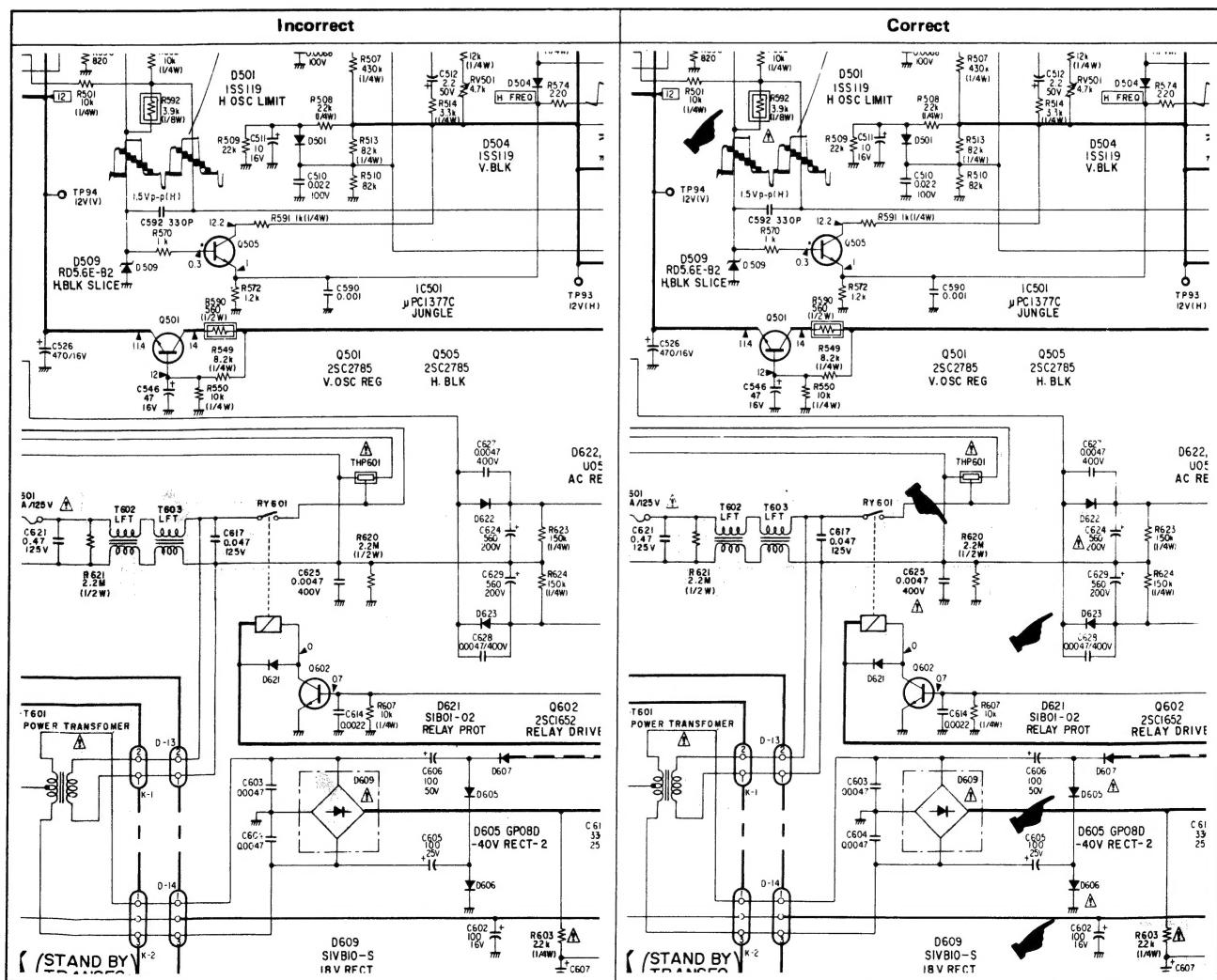
— Continued on next page —

CTV

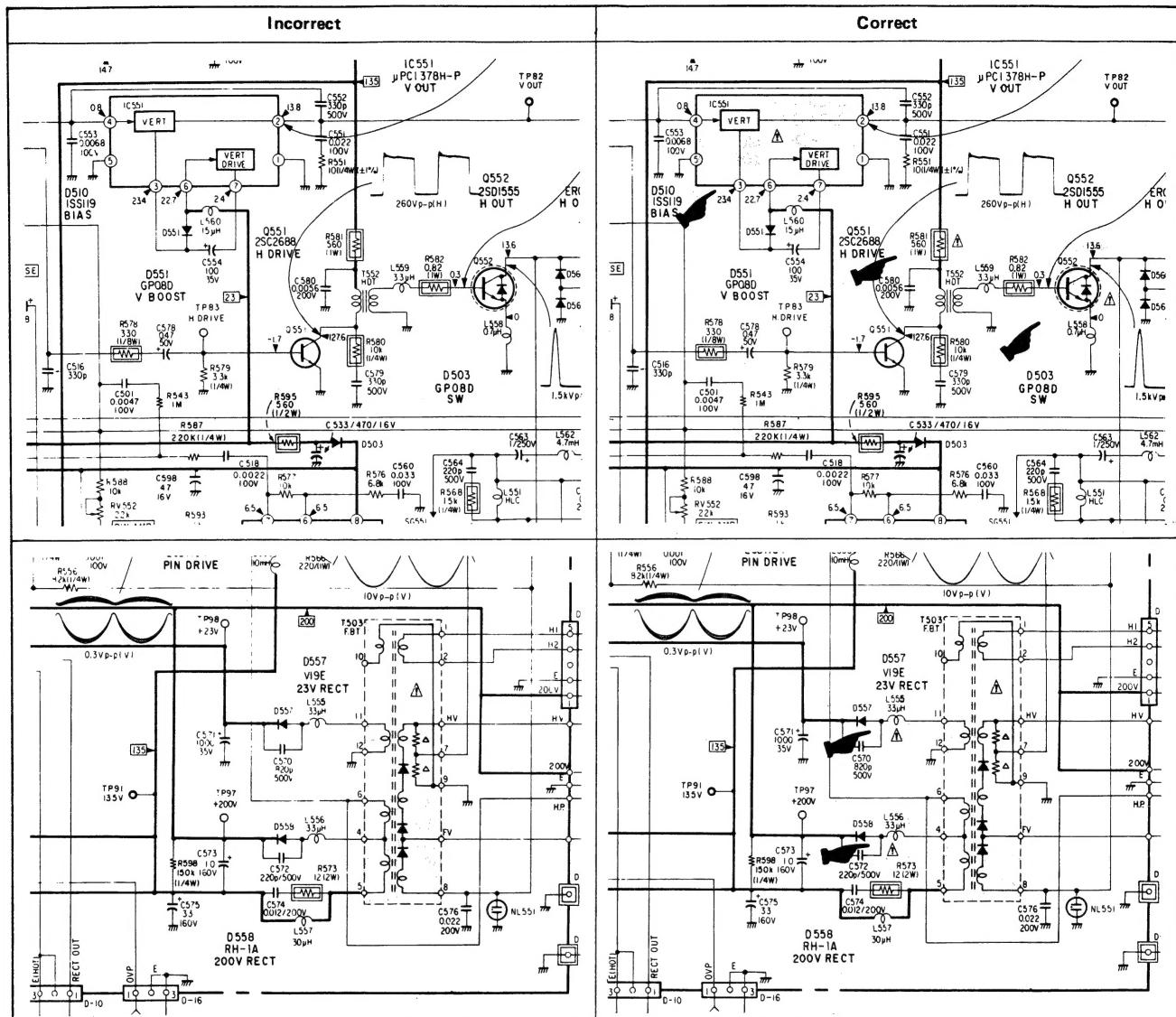
5-3. SCHEMATIC DIAGRAMS : P49 (GA Board)



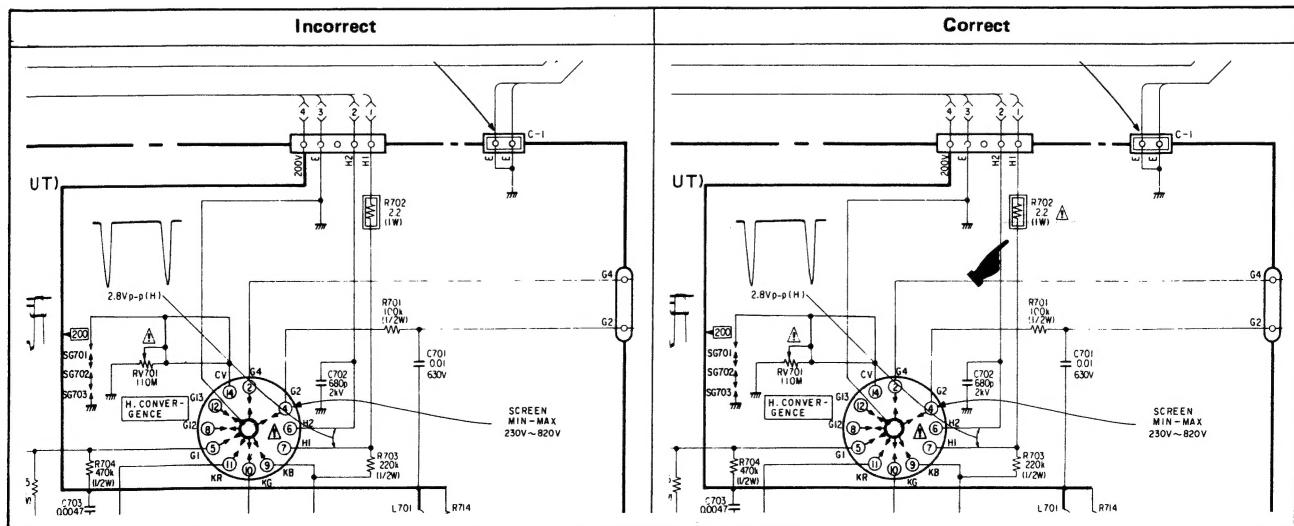
5-3. SCHEMATIC DIAGRAMS : P50 (D Board)



5-3. SCHEMATIC DIAGRAMS : P50, 51 (D Board)



5-3. SCHEMATIC DIAGRAMS : P52 (C Board)



7. ELECTRICAL PARTS LIST

GA BOARD

Incorrect							Correct						
Q651	8-729-902-10	TRANSISTOR	2SC3317-S				Q651	▲8-729-902-10	TRANSISTOR	2SC3317-S			
Q652	8-729-902-10	TRANSISTOR	2SC3317-S				Q652	▲8-729-902-10	TRANSISTOR	2SC3317-S			
R654	1-212-370-00	METAL OXIDE	6.8	5%	1W	F	R654	▲1-212-370-61	METAL OXIDE	6.8	5%	1W	F
R662	1-207-451-00	WIREWOUND	0.1	10%	1/2W		R662	▲1-207-451-11	WIREWOUND	0.1	10%	1/2W	

GB BOARD

Incorrect							Correct						
D655	8-719-300-09	DIODE	CTU-24S				D655	▲8-719-300-09	DIODE	CTU-24S			
D656	8-719-903-06	DIODE	ERC84-009				D656	▲8-719-903-06	DIODE	ERC84-009			
D657	8-719-981-01	DIODE	ERA81-004				D657	▲8-719-981-01	DIODE	ERA81-004			
D658	8-719-302-00	DIODE	RU-2M				D658	▲8-719-302-00	DIODE	RU-2M			
D659	8-719-302-00	DIODE	RU-2M				D659	▲8-719-302-00	DIODE	RU-2M			
L659	1-407-687-00	MICRO INDUCTOR	3.3UH				L659	▲1-407-687-11	MICRO INDUCTOR	3.3UH			
R659	1-247-033-11	CARBON	100	5%	1/8W	F	R659	▲1-247-033-11	CARBON	100	5%	1/8W	F

C BOARD

Incorrect							Correct						
R702	1-212-364-00	METAL OXIDE	2.2	5%	1W	F	R702	▲1-212-364-61	METAL OXIDE	2.2	5%	1W	F

D BOARD

Incorrect							Correct						
C624	1-125-457-11	ELECT(BLOCK)	560MF	20%	200V		C624	▲1-125-457-11	ELECT(BLOCK)	560MF	20%	200V	
C625	1-161-953-00	CERAMIC	0.0047MF	20%	400V		C625	▲1-161-953-51	CERAMIC	0.0047MF	20%	120V	
C629	1-125-457-11	ELECT(BLOCK)	560MF	20%	200V		C629	▲1-125-457-11	ELECT(BLOCK)	560MF	20%	200V	
D605	8-719-911-55	DIODE	U05G				D605	▲8-719-908-03	DIODE	GP08D			
D606	8-719-911-19	DIODE	1SS119				D606	▲8-719-911-19	DIODE	1SS119			
D607	8-719-911-55	DIODE	U05G				D607	▲8-719-908-03	DIODE	GP08D			
D622	8-719-911-55	DIODE	U05G				D622	▲8-719-911-54	DIODE	U05G			
D623	8-719-911-55	DIODE	U05G				D623	▲8-719-911-54	DIODE	U05G			
IC551	8-759-105-82	IC	UPC1378H-P				IC551	▲8-759-105-82	IC	UPC1378H-P			
L555	1-407-699-00	MICRO INDUCTOR	33UH				L555	▲1-407-699-11	MICRO INDUCTOR	33UH			
L556	1-407-699-00	MICRO INDUCTOR	33UH				L556	▲1-407-699-11	MICRO INDUCTOR	33UH			
Q552	8-729-203-80	TRANSISTOR	2SD1555-LB-S1				Q552	▲8-729-203-80	TRANSISTOR	2SD1555-LB-S1			
R581	1-213-140-00	METAL OXIDE	560	5%	1W	F	R581	▲1-213-140-61	METAL OXIDE	560	5%	1W	F
R592	1-249-424-11	CARBON	3.9K	5%	1/8W		R592	▲1-247-586-11	CARBON	3.9K	5%	1/8W	
R620	1-202-723-00	SOLID	2.2M	10%	1/2W		R620	▲1-202-723-51	SOLID	2.2M	10%	1/2W	

X BOARD

Incorrect							Correct						
IC1108	8-749-943-52	IC	STK-4352				IC1108	▲8-749-943-52	IC	STK-4352			